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BOOK REVIEWS

Restatement and Revision of Accounting Research Bulletins (Accounting Research Bulletin 43).

Supersedes Accounting Research Bulletins 1 through 42 (1939 to 1953). Issued by the Committee on Accounting Procedure, American Institute of Accountants. AMERICAN INSTITUTE OF ACCOUNTANTS, New York, N. Y., 1953. Pages: 159; $2.00 paper bound, $3.00 cloth bound.

This is a restatement and revision of 34 of the 42 Accounting Research Bulletins issued by the Institute's Committee on Accounting Procedure during the period 1939-1953. The remaining 8 Bulletins, reports of the Committee on Terminology, are being issued separately.

In preparing the Restatement, the Committee eliminated parts of the Accounting Research Bulletins no longer applicable, and rearranged the remaining material by subjects, after condensation and, where necessary, clarification and change.

The 133 pages of text are followed by three appendices and a detailed, cross-referenced 15-page topical index.

Appendix A lists the 42 Accounting Research Bulletins and indicates where they may be found in the *Restatement,* or what other disposition has been made of them.

Appendix B reflects the "changes of substance" made in the bulletins during the revision. It contains sections on the Applicability of [the] Bulletins; Current Assets and Current Liabilities; Application of United States Government Securities Against Liability for Federal Taxes on Income; Intangible Assets; Contingency Reserves; Quasi-Reorganization or Corporate Readjustment; Business Combinations; Income Taxes; Renegotiation of Government Contracts; Foreign Operations and Foreign Exchange; and Unamortized Discount, Issue Cost, and Redemption Premium on Bonds Refunded.

Appendix C lists the Bulletins not included in the Restatement and explains why.

Restatement and Revision of Accounting Research Bulletins joins the group of essential working materials for practitioners, teachers, and students of accounting.

LEO ROSENBLUM

Bernard M. Baruch School
of Business and Public Administration
The City College of New York

(Continued on page 606)

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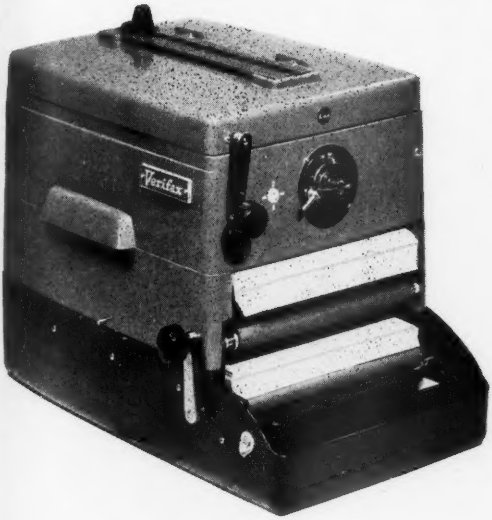

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Book Reviews

(Continued from page 604)

Fraud Under Federal Tax Law (Second Edition—1953)

By Harry Graham Balter. Commerce Clearing House, Inc., Chicago 1, Ill., 1953. Pages: 495; $7.50.

Law is born from the pangs of litigation and no aspect of tax law is currently and potentially being tested in the courts as much as questions of tax fraud. This harvest of legal problems and precedents is being reaped from the intensive special investigations instituted in the wake of the lush war and postwar period and bids fair to continue for quite some time. Current pronouncements from the Internal Revenue Service make it clear that the drive on evaders will continue unabated and, perhaps, with even greater vigor than heretofore. This enforcement program brings in its wake many new and unique problems for the tax practitioner, be he accountant or attorney, and the determination of these issues, both in the civil and criminal spheres, results in judicial clarification of many doubtful and disputed questions of law.

Any treatise on the subject of federal tax fraud must therefore either be prepared in loose-leaf form or be frequently revised. The author and publishers of "Fraud Under Federal Tax Law" have adopted the latter procedure—and to good effect.

Much judicial and administrative water has flowed under the tax fraud bridge since the publication of the first edition of this excellent treatise in 1951. Taxpayers and practitioners alike have weathered the revelations of the King Committee on the operations of the Bureau of Internal Revenue and the Chelf Committee on the operations of the Tax Division of the Department of Justice; the abandonment of the "voluntary disclosure policy" in the Bureau of Internal Revenue; the abandonment of the "health policy" in the Department of Justice; the substantial changes in the administrative review of criminal tax fraud matters; the reorganization of the Bureau of Internal Revenue; and the reorganization by the Internal Revenue Service of the reorganization of the Bureau of Internal Revenue.

This thoroughly revised second edition of the only available coordinated study of the law on federal income tax fraud gives full effect to all of these new facets of the subject, as well as all the new judicial determinations available at the date of publication. Unfortunately, or perhaps fortunately, the courts do not mark time between editions, and the tax practitioner is still constrained to study continuously current decisions in order to keep abreast of this rapidly expanding field.

This latest edition of Mr. Balter's work includes important and significant new material on procedure on the processing of fraud

(Continued on page 608)

Book Reviews

(Continued from page 606)

cases (Chapter III) and on the vexing problem of taxpayer cooperation during the course of a fraud examination (Chapter VII). Of particular interest to the practising accountant is the chapter on the production of books and records (Chapter VI) which includes an analysis of the Commissioner's statutory rights and powers, vis-a-vis third parties as well as the taxpayer, enforcement procedure, right to counsel, constitutional privileges and privileged communications.

This current edition of a basic text in the tax fraud bibliography has very skillfully absorbed the substantial quantity of new administrative and judicial material which has evolved since the initial publication. This book remains a "must" on the shelves of any practitioner whose work carries him into or near the labyrinths of tax frauds.

David Zack

New York, N. Y.

Profit Analysis, Distribution Costs and Working Papers

By Frederick M. Eisner. Published by the Author, White Plains, N. Y., 1953. Pages: 364; $10.00.

Our American economy, proceeding in its normal wholesome course, presents a constant challenge in the form of competitive prices. The fact that this challenge has always been met is not only a credit to American ingenuity but truly responsible for our high standard of living and contribution toward improvement of the standards of other nations.

Inventive genius is entitled to the major share of approval and acute intelligence applied to production methods a good deal of the remainder. Accounting contributes importantly to the latter in the form of data which, if unavailable, would make production's job more difficult in manifold proportions.

The costs of production and doing business are the circulatory and nervous systems of commercial enterprises, the relative weight of importance of each varying in different organizations. Suffice it to say that each is sufficiently vital to reduce an otherwise good business to wreckage, if ignored. Systems development applicable to production costs approaches the perfection of the fine arts, for a great deal of brain power has been devoted thereto, with admirable results. No business need be lacking in this respect.

Surprisingly, similarly successful application of thinking capacity has not been devoted to the costs of doing business, usually characterized as selling and administrative expenses, except in minor degree. Much, if

(Continued on page 610)

Book Reviews

(Continued from page 608)

not all, of this deficiency has been negated by the appearance of a new book entitled "Profit Analysis, Distribution Costs, and Working Papers" by Frederick M. Eisner, a Certified Public Accountant and Member of the Bar of considerable experience.

His work has made available, in easy reading style, the fruit of his concentration of many years. The content is unique, for quick comprehension is a practical and assured result. Accompanying the presentation of well-expressed, sound and incontrovertible theories is a complete set of working papers. Such working papers show the progressive steps, reduced to interesting simplicity and clarity, of application to conditions, facts and circumstances of a real multi-product business. The methods outlined and carried out to detail are flexible, consequently adjustable to the needs of smaller enterprises having fewer products and problems, in fact are applicable as well to the single product business.

The major purpose of the book is to demonstrate methods of determining costs of doing business, subsequent to production costs, namely selling and administrative expenses, applied to individual products and customers. Sales, production and other management personnel have long been concerned about relative costs of servicing small and large orders and accounts. A large order results in savings which are customer-recognized and must be passed on to be competitive. Conversely, small orders incur disproportionately greater costs which must be reflected in selling prices to operate profitably. How much, is the problem. This book provides the answers and excessive contortions have been cleanly removed.

Current statutory restrictions on price favoring have been appropriately recognized. Here the author's legal training has been useful indeed.

Last, but by no means least, utilization of Mr. Eisner's methods will greatly assist a potential contractor competing for business to be placed by government agencies, to quote realistic and favorable bids.

The following summary includes the major benefits offered:

1) Motivation of executive action
2) Computation of sales prices based on varying methods of sale or delivery
3) Detection of unprofitable merchandise departments or products
4) Control of efficiency of functional or service departments
5) Control of inventories
6) Provision of the basis for incentive plans to department managers and salesmen
7) Control budgets of sales and marketing expenses

(Continued on page 611)

Book Reviews

(Continued from page 610)

8) Analysis of differences between budgeted and actual profit or loss results of a department or a product; and pin-point responsibility for the variances.

ALBERT WINTHROP

New York, N. Y.

Education and Service to Management

Address at the Eleventh Annual Conference of The Institute of Internal Auditors, St. Louis, Mo., October 20 and 21, 1952; also, the Thurston Award Papers. THE INSTITUTE OF INTERNAL AUDITORS, New York, N. Y., 1953. Pages: 102; $——.

The late Robert H. Montgomery predicted: "the development of internal audit departments . . . is likely to continue and . . . will have a major effect on the practice of public accounting." (*Montgomery's Auditing*, 7th Ed., p. 53). Accordingly, the profession welcomes the periodic appearance of authoritative materials emanating from the Institute of Internal Auditors.

This pamphlet contains the addresses delivered before the Eleventh Annual Conference of the Institute of Internal Auditors; the theme of the Conference was "Education and Service to Management." Also included are the papers which won the Institute's first two annual Thurston Awards.

The elements of a training plan for internal auditors are discussed by W. R. Davies, C.P.A., Director of the Audit Division, United States Steel Company. His contribution, entitled "On-the-Job Training and Job Improvement for Internal Auditors," includes many procedures capable of incorporation in the staff training programs of public accounting firms.

The report of the Institute's Committee on Internal Auditing Principles and Practices (Chapter 4 of the work under review) will be of special interest to public accountants. It includes sections called "Relationship with Outside Accountants" (pages 34-35) and "Auditing Methods and Reporting" (pages 35-38). Practitioners will find the latter information useful in building up check lists dealing with clients' internal auditing procedures.

LEO ROSENBLUM

Bernard M. Baruch School
of Business and Public Administration
The City College of New York

(Continued on page 613)

BOOK REVIEWS

(Continued from page 611)

Principles of Auditing

By Walter B. Meigs. Richard D. Irwin, Inc., Homewood, Ill., 1953. Pages: xiii + 584; Questions and Problems: 140; $8.65.

This text is notable for its strict adherence to the presentation of the principles and procedures of auditing. Very little space is given to a reiteration of accounting principles.

The plan of the work is typical of auditing texts. It begins with a chapter on the *Purpose and Nature of Auditing,* followed by *Audit Working Papers, Internal Control,* and the *Examination of General Records.* These topics are followed by chapters on the auditing of assets, liability and capital accounts. Balance sheet categories have been tied to their related revenue or expense counterparts. Thus, Chapter 7 is entitled *Accounts Receivable and Sales Transactions,* and Chapter 14 is *Accounts Payable and Purchase Transactions, Other Current Liabilities and Related Expense Accounts.*

The author emphasizes the importance of profit-and-loss analyses. Following the chapter on proprietorship, there are two chapters given to the further auditing of revenue and expense accounts. It is pointed out on page 430 that the connection of balance-sheet and profit-and-loss account verification ought not "to obscure the fact that the auditor's review of income and expense transactions should be much more than an incidental by-product of his examination of assets and liabilities."

The importance of reliable internal control is stressed throughout the book. A section in each grouping of audit procedures is devoted to the subject, with applicable excerpts from an internal control questionnaire. The author's chapter (4) on the examination of general records is outstanding. The procedures are carefully and interestingly explained. The chapter (2) on audit working papers appears to be less adequate. Nothing is said about various "tie-ins," i. e., from subschedule to lead schedule and lead schedule to working trial balance. It would be doubt-

(Continued on page 616)

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Book Reviews

(Continued from page 613)

ful if a student could get much of an idea of the content and arrangement of a set of working papers from the discussion. Nor is there further explanation in connection with the chapter on the audit report.

The author was alert to the pronouncements of the American Institute of Accountants and of the Securities and Exchange Commission. Wherever applicable, the recommendations and requirements of those bodies are presented. Another helpful feature of the work are the descriptions of business procedures and practices. These are connected with the discussions of internal control and auditing methods. The reader thus gets the feeling that he is dealing with a "going concern," not auditing static masses of inert data. Moreover, the author has had access to and made use of the staff manuals of accounting firms, which contributes to the practicality and current authenticity of the material.

In each grouping of procedures, the author gives the objects of the examination. The questions and cases set at the end of each chapter are designed to stimulate interesting discussion. They seldom call merely for the recital of a list of audit procedures.

The chapter (19) on audit reports and certificates seems to be too brief. Little attention is given to the handling of qualifications in the certificate. In the discussion of the "long form" almost no space is devoted to analyses of the statements. The illustration is largely an expansion of balance sheet data.

The last five chapters are devoted to certain special phases of auditing. They include the auditing of government contracts, the sales tax audit, and general and special aspects of internal auditing. While the material is authentic and interesting, it is not sufficiently detailed to add much to the usefulness of the book.

There are a few minor criticisms. The subject of materiality and significance is hardly mentioned, although it is a very important one. The author does not bear down very hard on the subject of auditing standards. He might profitably have given them more space. Ony one case is cited in illustration of legal liability proceeding from disregard of the standards. It may also be noted that in discussing several methods of accounting for accounts payable, the built-up voucher procedure was not mentioned.

The problem material is in a separate 140-page booklet. This also contains a number of questions and cases. A great many of these are taken from past A.I.A. examinations. There is no audit case which continues through the various procedures to the audit report.

(Continued on page 617)

BOOK REVIEWS

(Continued from page 616)

A study of this text should be helpful to in the categorical way frequently required on the C. P. A. examination. Details are not overlooked but, at the same time, are not belabored.

Professor Meigs has produced a very satisfactory book. The writing style is clear and vital. The work is designed to give the student a comprehensive, coordinated view of the auditing process. It should also prove valuable to a practitioner.

WILLIAM H. CHILDS

Hofstra College
Hempstead, N. Y.

Accounting and the Law

By James L. Dohr, George C. Thompson and William C. Warren. WEST PUBLISHING COMPANY, St. Paul, Minn., 1952. Pages: xxvi + 965; $10.00.

At least since the time of the commercial renaissance in Italy, many legal rights have turned upon accounting records and accounting rules. Some farsighted American lawyers of the past, such as Thomas Jefferson and Oliver Wendell Holmes, were aware of this fact and made it their business to understand the principles of accounting. Until about 1940, however, many law schools continued to look with some disdain on accounting as being a knowledge less important to law students than literature, languages and the other liberal arts.

With the advent of the New Deal, and the contemporaneous increase in the importance of taxation, securities regulation, and corporate reorganizations, the law schools took a second look at the relationship between the two professions of accounting and law. They quickly saw the great extent to which accounting principles and terminology pervaded those new areas and recalled with some shock that accounting principles overlapped also into the older fields of trusts, labor law, public utilities, contracts, and even torts and criminal law. Hurried surveys revealed an appalling inadequacy on the part of the average law student to comprehend the accounting aspects of these areas, and a rush began to add accounting courses to law school curricula.

(Continued on page 664)

THE NEW YORK CERTIFIED PUBLIC ACCOUNTANT

EMANUEL SAXE, *Managing Editor*

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The Use of Statistics in Accounting Control

By ROBERT M. TRUEBLOOD, C.P.A.[1]

It is the author's thesis that it is incumbent upon accountants to explore the possibilities of adapting statistical techniques to accounting problems. Following a brief introduction, wherein some basic statistical concepts are established, the accounting areas subject to statistical exploration are stated, the progress to date in the literature in this area is reviewed, and four case studies (sponsored by a study group which includes the author) are reported upon. The paper concludes with a statement of the strategy of the research underlying the case studies and a statement of six tentative conclusions.

p. 19-1700

ROBERT M. TRUEBLOOD, C.P.A., is a partner of Touche, Niven, Bailey & Smart, CPA's, Pittsburgh, Pennsylvania, and has been with his firm since 1947. Prior to this, he was employed by Baumann, Finney & Co., Chicago, Illinois, and by Allen R. Smart & Company, until its merger with his present firm. He has also served in the Navy Cost Inspection Service and taught at Duquesne University in Pittsburgh.

Mr. Trueblood is Chairman of the Pittsburgh Chapter and a member of the State Council of the Pennsylvania Institute of Certified Public Accountants.

This paper is reprinted by permission from Section 3 of the July, 1953, issue of the *N.A.C.A. Bulletin,* containing the addresses delivered at the 1953 Annual International Cost Conference of the N.A.C.A. in Los Angeles, Calif., on June 16, 1953.

Two aspects of accounting control are of significance in the discussion of statistical applications in the accounting area. The first of these aspects is relatively mechanical in nature and has been defined by Eric Kohler as, "The administrative procedures employed in maintaining the accuracy and propriety of transactions and the bookkeeping record thereof." The second aspect of accounting control is somewhat broader and more profound. It recognizes the management control concept, "Any of the various accounting procedures or devices having as their purpose the supplying to management of informational records and reports essential to the solution of administrative problems."[2]

Accounting in its earliest phases was designed only to perform record-keeping and data-processing functions. For example, a seller developed some rough means for keeping track of his customers' obligations to him. From this clerical notion, there subsequently evolved

[1] The author is indebted to W. W. Cooper, R. M. Cyert, and R. W. Johnson for assistance and criticism in preparing this paper. Messrs. Cooper and Cyert are both on the faculty of the Graduate School of Industrial Administration, Carnegie Institute of Technology. Mr. Johnson is with Touche, Niven, Bailey & Smart.

[2] Eric L. Kohler, *A Dictionary for Accountants,* New York, Prentice-Hall, Inc. (1952), p. 9. This source should also be used for the definitions of statistical terms found elsewhere in this paper.

a procedure by which financial statements were prepared from prime accounting data. These financial statements became, in themselves, an integral part of management control in the very broad sense. However, the most significant aspect of the development of accounting was that both accountants and management gradually became aware that it was possible to use certain routinely developed data as internal measurement and interpretive devices for control purposes. An example is supplied by the widely used analysis of standard cost variances.

Today, accounting is fully recognized as a management control device. Management depends upon accounting to provide current data in a fashion which not only discovers but also predicts trouble areas. As a matter of fact, cost accounting was one of the first genuine management control devices generated by the accounting profession. Even today, cost accounting is still probably the most important single control device used by management. Its status as one of the few systematic management control devices which have been developed, gives cost accounting particular significance.

Accountants are continually faced with the responsibility of codifying and systematizing their present experience and practice. Accountants are also constantly moving forward in their search for new approaches and better tools with which to tackle management control problems. It will be contended herein that statistical methodology can give accounting much aid in this development.

The Statistical Viewpoint

Dr. W. G. Cochran, president of the American Statistical Association, recently remarked that he regarded the prime requisites of the statistical viewpoint in relation to business problems to be: (1) a critical attitude toward data, (2) the ability to look forward and (3) the ability to define problems clearly and to attack their solution logically.[3] These attitudes are precisely those which are required of the creative accountant. It is true to say that statistics is nothing more than a methodology, or basic technique, for dealing with quantitative data. Since accountants work in the first instance with purely quantitative data, it seems reasonable that accounting should be able to draw most fruitfully from the methodology of statistics.

Statistics as a methodology has contributed significantly to progress in many of the modern sciences and several of the professions, some of which deal to a lesser extent than accounting with quantitative data. For example, in the field of psychology, the better personnel tests all incorporate statistical designs. In medicine, the widely publicized experiments with polio vaccines are based on statistical concepts. This is not to suggest that accountants should summarily substitute decisions based on mathematical formulations for decisions based on subjective judgment. Creative accountants should, however, develop and use whatever objective rules and devices are available as aids in the decision-making process and should reduce the areas in which purely subjective judgments are required. Accordingly, it is incumbent upon accountants to explore the possibilities of adapting statistical techniques to accounting problems.

Fundamental Statistical Concepts

Although it is not the purpose of this paper to describe statistical techniques in any detail, the following simple illustration may serve to establish the meaning of a few basic statistical terms. Assume that 100,000 black and white balls are mixed in some unknown proportion in a bowl. The entire group of 100,000 balls constitutes the *universe*, the total group of objects. If 400 balls are drawn from the bowl, these 400

[3] In remarks at a conference on Modern Statistical Methods for Business and Industry at Carnegie Institute of Technology (April 30, 1953).

balls are a *sample.* If the 400 balls are drawn in such a way that each of the 100,000 balls has the same chance of selection, the sample is called a *random* sample. A random sample is necessary in order that probability statements can be made about the universe on the basis of the sample.

Assume further that 40 black and 360 white balls are found in the random sample. On the basis of these facts, it can be said that the proportion of black balls in the universe ranges from 7 per cent to 13 per cent. This estimate has a 95 per cent chance of being correct. These conclusions are based on the *laws of probability,* which are fundamental in statistics.

The range, 7 per cent to 13 per cent, stated to be the probable limits of black balls in the universe, may be referred to as the *precision* of the estimate. The statement that the particular conclusion has a 95 per cent chance of being correct relates to the statistical notion of *risk.* The user of this statement must risk being wrong 5 per cent of the time. It is important to know that both the precision and the risk in all such estimates can be measured and controlled to any desired degree.

If, in the above example, 100,000 accounts payable vouchers are substituted for the 100,000 balls, the underlying statistical concepts do not change. Admittedly, in this analogy, the characteristics of the vouchers are much less readily measured than the color of the balls. Around this problem of definition lies a good deal of the difficulty in getting started at the business of applying statistics to accounting problems.

Accounting Areas Subject to Statistical Exploration

The accountant must have some appreciation of statistical methods and viewpoints, in a broad sense, before he can employ statistical techniques profitably. The following three points will furnish at least a rough indication of the types of problems and areas to which statistics may be most suitably adapted:

1. Wherever masses of data are involved.
2. When accounting data can be stated in quantitative terms.
3. When conclusions based on measurement and interpretation of something less than 100 per cent of the data are acceptable.

Given any of these characteristics, a particular accounting or control problem should be reexamined in order to determine whether the statistical approach would yield equal or better results, in an economical fashion.

Summary of Progress to Date

In order to evaluate the potentialities of statistical applications to accounting, it may be helpful to present a brief summary of progress which has been reported in the literature. Two examples will suffice—one from the field of statistical quality control and the other from the field of sample survey design.

Statistical Quality Control

Most industrial accountants are familiar with statistical quality control techniques which have made spectacular progress since the beginning of World War II. In essence, these techniques make possible the maintenance of specified levels of quality in manufacturing processes, without 100 per cent inspection. Statistical quality control resulted from a systematic reassessment of an old problem. In this case, production adapted statistical methodology to its own purposes. There have been various attempts to carry over directly into the accounting control function the basic procedures and philosophies underlying statistical quality control methods. Accounting literature reports a number of successful applications which relate, in large part, to accounting control in the detailed or mechanical sense.

One such application by The Standard Register Company has been reported by Richard B. Shartle.[4] Here

[4] Richard B. Shartle, "How Scientific Sampling Controls Accuracy in Invoicing," *Journal of Accountancy,* Vol. 94, No. 2, pp. 167-171 (August, 1952).

an acceptance sampling plan, combined with a control chart, has supplanted a 100 per cent inspection program for sales invoices. In this instance, the elimination of all errors was not considered necessary. Rather, a sampling plan was devised to insure the discovery of a level of errors considered to be excessive. In order to maintain a satisfactory average quality level, it was necessary to specify: (1) the quality of work which would be acceptable, (2) the quality of work which would be unacceptable and (3) the allowable risks.

Mr. Shartle indicates a number of important advantages resulting from the introduction of this plan. Among these are a saving in verification time due to looking at fewer invoices, an improvement in the quality of work because of the visible control chart, a quicker indication of the nature and causes of error, greater confidence by supervisors in their workers, and the ability of management to tell at a glance the current quality level. "Finally," Shartle notes, "there is also the possibility of savings due to methods or system improvements made as a result of investigating 'out-of-control' situations appearing on the control chart."

Although the importance of statistical quality control applications to the accounting area should not be minimized, a word of caution is necessary. The attributes of accounting data are, in many cases, much less easily measured than physical characteristics of manufactured products. It is in order, therefore, to suggest that the mechanical carry-over of statistical quality control techniques into accounting should be avoided.

Sample Survey Design

Scientific survey sampling also offers a rich field for exploitation. Practicing and industrial accountants examine samples every day, quite deliberately. Characteristics of the sample are projected into inferences about the universe. Surprisingly enough, despite the accountant's everyday recourse to samples, he has made little use of statistical sampling. At least there is a dearth of published evidence regarding such adaptations.

An application of survey sampling to the problem of the nation's railroads has recently been reported.[5] The allocation of less-than-carload freight revenues among all the roads which participate in transporting a given shipment has customarily been made on the basis of percentages developed many years ago. Where traffic patterns have changed, this practice could work substantial hardships on some roads. In order to redetermine appropriate allocation percentages, it was found that a 10 per cent sample of waybills provided a satisfactory substitute for a complete survey.

Recent Explorations in Accounting Areas

These above indications of progress are not intended to be complete, either in relation to areas or to cases. Personal conversation and correspondence indicate that many people and firms are doing much more in the application of statistical procedures to accounting problems than is evidenced by the literature. Publication of more cases and experiments in accounting or statistical journals would be helpful to persons working in this area.

About a year ago, a working group[6] was set up quite informally in Pittsburgh for the exploration of statistical applications to accounting and auditing. A good deal of preliminary effort was devoted by the group to mapping strategy and developing effective working rules. Keeping in sight the main

[5] By Dr. C. West Churchman of Case Institute of Technology. See *Business Week*, pp. 96-98 (May 30, 1953).

[6] In addition to W. W. Cooper, R. M. Cyert, R. W. Johnson, and the author, this group includes Eric L. Kohler, consulting accountant of Chicago; David Rosenblatt, consulting statistician and professor of statistics at American University, Washington, D. C.; and Barry M. Rowles with The National Supply Company, Pittsburgh.

objective of bringing statistical methods to bear on the problems of accounting and audit control, the group decided to begin with relatively simple areas.

A number of projects have been undertaken and these studies are being expanded as rapidly as time and resources permit. Study results to date have been encouraging. As of this time, a summary report and preliminary findings may be made on the following studies: (1) application of quality control principles to standard cost variance analysis, (2) use of survey sampling methods for determining "lifo" valuations, (3) adaptation of statistical methods to aging receivables, and (4) audit confirmation of accounts receivable. The first three studies will be briefly reported on in immediately succeeding paragraphs. The fourth study will be reported on following general comments relating to application of statistics in the auditing field.

Study No. 1: Labor Efficiency Reports

This study considered the problem of interpreting labor efficiency reports in a plant having many cost centers. In the particular plant studied, the method of presentation consisted of issuance of a daily tabular report, showing the previous day's efficiency and the average efficiency for the month to date. It was hoped that such reports would provide the basis for prompt supervisory action. For a variety of reasons, however, the reports did not serve this purpose. Most important among these reasons was the supervisors' difficulty in evaluating the significance of variations in efficiency from day to day.

As an experiment, the daily percentages for a three-month period were plotted on a control chart, using limits based on past experience. Management officials, from the foreman level up, have expressed themselves as seeing much more value in this form of presentation. Not only does the chart indicate out-of-control points which should be investigated, but it may also predict impending problems. Although experience with this reporting technique has not continued long enough for any definite conclusion to be drawn, company management is presently convinced of its usefulness. Since the chart clearly distinguishes between random variations and out-of-control conditions, investigative effort can be confined to those circumstances warranting attention.

In this study, no new accounting or statistical techniques were used. An old and routine problem was re-explored. A device was found by which, within established limits of error, random fluctuations can be distinguished from causal problems. Based on this approach, accounting control is given a new significance.[7] There is, indeed, reason to believe that control chart methods and principles can be extended into the broad area of management control.

Study No. 2: Dollar-Value "Lifo" Indexes

A fairly well-developed experiment can be reported in the survey sampling area, in relation to a nation-wide inventory of some 250,000 individual items. A reliable index for purposes of determining "lifo" valuations under a dollar-value technique was required. The first sample developed as a solution for this large-scale clerical problem required selection of 25 per cent of the items, representing 55 per cent of the dollars of total inventory involved. The resulting index is statistically estimated to be within 0.25 per cent of the true universe index, 95 per cent of the time. Further refinement of the statistical methods used indicates that this index can be obtained with the same precision and risk, based on only 4 per cent of the

[7] For a somewhat similar application relating to scrap yields, see C. E. Noble, "Cost Accounting Potentials of Statistical Methods," *N.A.C.A. Bulletin*, pp. 1470-1478 (August, 1952).

items, representing 25 per cent of the dollar value.

In this case, preliminary applications of statistical methods to an accounting problem provided, with accounting guidance, a reduction in the amount of data required to achieve stated objectives. Further, combined accounting and statistical analyses now point the way to still further reductions. More important, perhaps, than the direct study results reported here is that, once the index was developed for the isolated purpose of "lifo" valuations, the company involved found numerous collateral uses for the same index or for other indexes readily developed from the basic sample data.

Study No. 3: Aging of Accounts Receivable

The aging of accounts receivable balances, a project which is annually undertaken for both auditing and internal management purposes, is also under study. The specific firm involved carries more than 100,000 individual accounts receivable. These receivables are homogeneous in nature.

The current practice involved in making the annual aging survey is to select a judgment sample from each of several categories of accounts. An estimate of the age class proportions in each category is obtained and this estimate is applied to the respective class totals. Loss expectancy rates, based on experience, are then applied to each age class total in order to determine bad debt reserve requirements. Several properties of the present aging procedure are subject to question: (1) the precision and risk which attach to the estimates of the age class proportions, (2) the extent to which the sample size used satisfies the accountant's subjective notion of proper precision and risk, and (3) the efficiency of the present plan in obtaining the information required for estimating the total bad debt reserve. Tentative results indicate that this area is a fruitful one for the application of statistical techniques. On the basis of statistical tests made with respect to historical data, it has been tentatively concluded that treating receivables by category is unnecessary in this case. Elimination of this segregation can result in considerable cost saving, even if there is no reduction in total sample size. The second preliminary conclusion is that the sample size currently used provides precision for a given risk which is apparently much tighter than needed in the particular circumstances. Thus, a reduction in the absolute size of the sample seems quite probable.

Even if no efficiency improvements result from using statistical sample design in the approach to this aging problem, a substantial gain has been realized by establishing the precision and risk factors taken in the past and by comparing these factors with what are subjectively regarded as being reasonable criteria. Accordingly, the accuracy as well as the limitations of the reserve requirement calculations, will be more explicitly known.

Investigating Statistical Applications to Auditing

The area of audit, internal and external, must be regarded as an important part of accounting control. Industrial accountants, as well as auditors, are continuously appraising and drawing conclusions from basic accounting data. Statistical methodology is of great potential usefulness in this area. Ultimate progress in the field of statistical applications to auditing will, therefore, be of as much concern and interest to industrial accountants as it is to auditors. Some work on the application of statistics to auditing has been reported in the literature, but genuinely practical solutions to significant auditing problems have not yet appeared.

Auditing tests are made for two purposes:

1. To establish the bona fides of an account.
2. To infer from sample evidence the effectiveness of the operation of the internal control system.

The difference in these approaches may

be illustrated by reference to accounts receivable. It is relatively easy for the auditor to say that he is establishing the bona fides of accounts receivable by confirming a sample of accounts receivable balances. On the other hand, it is inappropriate to expect that the usual detailed tests of transactions necessarily establish the bona fides of balance sheet accounts. Accordingly, at least in large part, the auditor must, on logical grounds, realize that nearly all of his tests, including confirmation, actually represent a challenging of the operation of the internal control system.

Noting this audit philosophy, the auditor must concern himself with appraising each exception uncovered in the audit process in terms of its implications with respect to the operation of the internal control system. Indicated audit exceptions thereby become simply "clueing" devices in relation to the total system of internal control, and the auditor should relate exceptions located in one series of tests to exceptions located in other related series of tests.

Full exploration of the application of statistical methods to audit review of internal control systems will require recourse to a variety of statistical techniques. In fact, it is likely that modification and development of new statistical methods will also be required. Only a start has been made on this problem.

Study No. 4: Confirmation of Accounts Receivable

The audit area study relates to accounts receivable confirmation in a situation involving a large and homogeneous universe. Confirmation results for the past three years have been examined and appraised from the standpoint of the appropriate statistical measures. The maximum proportion of accounts in error, in any one of the three years studied, was computed as 1.7 per cent of the total accounts, with a risk of being wrong only 13 times in 10,000. Interestingly enough, it has been established that the same precision and risk could have been achieved by using a simple random sample roughly 25 per cent as large as the sample actually used.

In making this appraisal, past practices involved in both sample selection and auditing procedures were challenged. Quite apart from the indicated reduction in sample size, it was found that certain detailed auditing notions, previously followed explicitly, were not actually required. As a result of this study, a new sample design was formulated and has been tried. Preliminary results indicate that the new sample design will provide equally reliable information more efficiently.

The final phase of this study concerns the use of confirmation replies as internal control "clueing" devices, the interrelationships of audit exceptions in different series of tests, and the weighting of the seriousness of the various exceptions. These considerations are the most difficult of all but probably will be the most fruitful and important.

Strategy of Research and Some Tentative Generalizations

The research from which the above studies have evolved is being conducted in accordance with the following principles:

1. The attack on the question of statistical applications to accounting is being made in specific areas where such applications seem most feasible and most needed. This method is essentially a case study approach using live data.
2. Collaboration between disciplines is regarded as being especially important. A certain division of labor is, however, appropriate. Upon the accountant falls the responsibility for selecting the specific studies to be made. Beyond this, the accountant must be willing to work closely with the statistician in stating and clarifying objectives. The statistician carries the responsibility of understanding the accountant's objectives in relation to each problem and of developing suitable statistical techniques for their solution.
3. A team approach is required. All parties must be willing to develop the necessary understanding of each other's problems and points of view. Each must proceed far enough into the fundamentals of the other's discipline to develop a common

language, which is a necessary forerunner of that understanding.

4. Statistical techniques found suitable in other areas should not be accepted blindly. Time will be saved when existing statistical methods can be applied directly. However, it is anticipated that statistical techniques peculiar to accounting will ultimately be developed.
5. It is unwise to supplant satisfactorily performing accounting devices by statistical approaches, simply because of the exhilaration of experimentation and potential change. The research objective is improvement, not displacement, of accounting techniques.

The work of the group in exploring the usefulness of statistics in accounting and auditing problems has passed the talking stage, is in the action stage, but has not yet reached the point of stating final, substantive conclusions. Nonetheless, the following tentative conclusions can be presented:

1. The efficiency of sampling procedures can be improved by utilizing modern statistical principles, as distinguished from the more usual subjective procedures for sample selection. Incorporation of statistical principles in sample selection permits objective precision and risk determination and control in sample results.
2. In the audit area particularly, it is essential that indicated exceptions be thoroughly investigated to determine their implications with respect to the operation of the system of internal control.
3. In present practice, much accounting data is considered in a largely qualitative fashion. Use of statistical methodology requires quantitative characterization of all information in the manner of yes or no, 0 or 1. It may well be that such quantification can be applied to certain accounting areas in which subjective analyses have heretofore been considered unavoidable.
4. To the extent that the number of items examined is reduced by use of statistical procedures, relatively greater efforts can be economically directed toward the improvement of data measurement and interpretation.
5. Use of scientific sampling techniques may well increase the sample sizes presently used, in certain cases. It is incumbent upon the accountant, in such cases, to re-examine his position and to reach conclusions concerning the necessary balance between acceptable risk and reasonable cost.
6. Whenever a sample is used in accounting today, the risk of making a materially incorrect inference about the universe is present. Hence, it is important that risks presently taken be objectively measured. From the evaluation of present risks, it should be possible ultimately to define more or less standard precision and risk requirements appropriate to various classes of accounting or auditing decisions.

Many of the above findings have been generated by exploration of the audit area. It is significant, however, that the considerations underlying these tentative conclusions relate equally to all other areas of accounting control.

The group presently working in Pittsburgh regards the adaptation of statistics to accounting and auditing as an evolving process. Starts must be made in many isolated areas. The momentum so developed must then be relied upon to point the way to broader and more intensive applications. Developments of significance will come in due course but, probably, only after many initial projects have been tried and abandoned. In this development process, present practices of accountants and auditors will be subjected to a healthy challenge.

The entire problem of adapting basic statistical methodology to accounting control lies ahead. To attack and satisfactorily resolve a problem of these dimensions will involve creative use of the resources of both professions. In part, the attack will have to come at the level of fundamental research. In part the attack will come, piecemeal, at the level of practical expediency. It is well, therefore, to recognize the limitations as well as the resources of both disciplines. Accountants are not going to establish statistical techniques. Statisticians are not going to solve accounting problems. Collaborative efforts between the two disciplines will be required. Progress has been made in particular areas, but more work must be done by more people. It is to be hoped that practicing and industrial accountants will rise to the challenge which the task presents.

Prosecution of Business Frauds by the District Attorney

By Joseph M. Gasarch, C.P.A.

This authoritative article discusses the role of the District Attorney in the prosecution of business frauds, and how the creditors' accountant may aid him in that phase of his work.

The intricacies of finance in a metropolitan center offer opportunities for a wide variety of chicanery to those interested in capturing the allegedly "easy dollar." The methods employed are sometimes subtle; at other times they are so transparent that they challenge the credulity of the average person.

Confidence men and salesmen of gold bricks still attempt to carry on their nefarious trade and the unwary and gullible are frequently victimized. The District Attorney is concerned with these matters—but they are only a segment of the wide variety of commercial crimes which come to his attention, among which are frauds affecting insolvent debtors and their creditors.

Joseph M. Gasarch, C.P.A., has been a member of the Society since 1941, and is a member of the Committee on Bankruptcy Procedure.

Mr. Gasarch is also a member of the New York Bar and is now serving as Assistant District Attorney and Chief Accountant in the office of the District Attorney of New York County.

He holds the degrees of B.C.S. and LL.B. from New York University and LL.M. from St. Lawrence University. He has lectured extensively on the problems of internal control and fraud before various accounting societies.

This paper is based upon an address delivered by Mr. Gasarch before the technical meeting of the Society held on May 21, 1953, at the Engineering Societies Building, under the auspices of the Committee on Bankruptcy Procedure.

The office of the District Attorney of New York County is particularly well equipped to combat effectively these swindles, many of which require long and complicated investigations. A Frauds Bureau, manned by approximately 10 Assistant District Attorneys, and an Accounting Bureau staffed by Certified Public Accountants experienced in the complexities of investigating and prosecuting financial frauds, are well established arms of this office.

Matters involving financial loss resulting from criminal acts are brought to the attention of the prosecutor in a variety of ways. The facts warranting criminal action are often discovered and explored by the creditors' accountant in the course of his investigation into the affairs of an insolvent debtor. At other times, business misdeeds have come to the District Attorney's attention by virtue of the victim's complaint. And in still other instances, the machinery of investigation and prosecution is set in motion on the District Attorney's own initiative.

Careful investigation in cases of insolvency has often shown instances where the debtor himself had been so victimized that bankruptcy resulted. In other cases, the insolvent debtor was the suspected wrongdoer. In either event, the District Attorney, as well as creditors, is vitally concerned.

I doubt whether any accountant is sufficiently qualified as a crystalgazer to predict the results of his inquiry at the time he begins his inspection of the books and records of any insolvent

debtor. He can scarcely foretell with any degree of certainty whether his examination will disclose any wrongdoing. He must, therefore, proceed with his work so that he will be prepared to cope with any eventuality. The accountant must so perform his services that, in the event criminal action is warranted, there would readily be available to counsel and the appropriate authorities, the required data in the most comprehensive form, supported by the available evidentiary material.

There are many pertinent sections of the Penal Law of the State of New York, which might apply to a fraud against creditors—notably the crimes of larceny, issuing a false financial statement, and forgery through books of account or their destruction or alteration. It is therefore quite apparent that the District Attorney is armed with substantial weapons in his constant war on business frauds.

In the event that counsel for the creditors believes that the debtor has committed a fraud, creditors may proceed against the criminal directly through the Magistrate's Court, or their counsel may arrange for an appointment with the Frauds Bureau of the prosecutor's office. In my opinion, the latter course is often to be preferred, for the experts in the District Attorney's office are ready to extend the benefit of their specialized experience, review the facts and discuss the most feasible course of action. A far more effective prosecution (if one is warranted) can then be realized,for the prosecutor will have had an opportunity to analyze the merits of the complaint before any precipitous action is taken by the creditors.

Preliminary Procedure in the District Attorney's Office

At the initial conference with an Assistant District Attorney and a member of the prosecutor's accounting staff, there should also be present counsel and the accountant for the creditors who should come prepared to discuss all of the facts within their knowledge. A copy of the accountant's report, his worksheets and other supporting and pertinent data should be available at that time. During this meeting the facts will be explored and evaluated from the standpoint of the requirements of the Penal Law. Further meetings may be necessary so that all of the data in the possession of the complainant and his accountant may be analyzed and studied.

Having decided that a basis for a criminal prosecution exists, the prosecutor will request that the necessary books and records be turned over to him. In many instances further investigation will be indicated. These investigations will generally be conducted by the prosecutor's staff, who will also line up the evidence, so as to make possible an intelligent presentation of specific facts to the Grand Jury—for there cannot be a prosecution in general terms. The charges must be definite as to the nature of the crime, the date when it occurred, and the identity of the person or persons responsible.

If the Grand Jury, after considering only legally sufficient and competent proof, finds that a misdemeanor has been committed, then it will vote an information; or if the crime charged is a felony, an indictment will be handed up. The defendants will thereafter be arrested and the case set for trial.

The prosecutor's work at this point is far from finished. Preparation for trial must be complete and painstaking. Further investigation is sometimes required, witnesses must be interviewed and, in many instances, frequent conferences with the complainant and his accountant are necessitated.

The Role of the Accountant

Oftentimes, the success of a prosecution will depend upon the nature and quality of the accountant's work during the period before any criminal complaint was made. The accountant, in the course of his examination, should constantly bear in mind the possibility

that criminal action or other legal steps might become necessary. He should therefore use extreme caution in the manner in which he handles books and papers of the debtor and others. He should note the circumstances under which he examined them, from whom he received them, and the condition of the records when first made available to him. Of course, a complete inventory of all records should be prepared. It is particularly important that no audit marks, or writing of any sort be made in the debtor's books. This will avoid unnecessary explanations at the time the records are offered in evidence in any legal proceeding. A complete record should be kept of the identity and address of all employees and the nature of the duties of each one, so as to establish responsibility for book entries or other acts.

The evidence must always be carefully preserved and kept under the control of a responsible person. Worksheets should be complete and accurate, for in the absence of original records and under certain specific circumstances the accountant's worksheets may be admitted in evidence. Subsidiary records such as shipping receipts, receiving records, work tickets, inventory records, cost records, check books and other documents and papers should be guarded as carefully as the regular books of account.

If, during the course of the examination, discussions were held between the accountant and the debtor or his representatives, full notes of these conversations should be made. It is often important to determine whether the debtor had any familiarity with the books, records, accounts, and any financial statements which may have been prepared.

The mere fact that a person is an officer of a corporation does not make him chargeable with actual knowledge of its business transactions or of the entries made in its books of account. There must be proof that the defendant had actual knowledge of the entries contained in the books or that he authorized them or caused them to be made.

The importance of establishing the relationship of the debtor to his books of account was pointed up in *People* v. *Burnham,* 120 A.D. 388 (1907), which reversed a conviction for grand larceny against an officer of a corporation. The higher court held that the trial judge was in error when he admitted in evidence corporate books with which the defendant had nothing to do and of which he had no knowledge. The court said, on page 389:

> ". . . Mere proof that the defendant was an officer of the corporation did not justify the court in admitting all the books of the corporation as evidence against him in a criminal proceeding without proof of further connection of the defendant with the books or entries."

The accountant's report must be factual and should avoid speculation. He must be certain of his facts and avoid any ill-considered charges or accusations. Any conclusion that may be drawn should be based on books and records which will be admissible in evidence or on other evidentiary matter. All accounting schedules should be meaningful and prepared in such fashion that a layman may understand their significance. Wherever possible, the source of the data contained in these schedules should be indicated.

Summaries of voluminous accounting records in the form of schedules are generally admissable in evidence, if the records from which they were prepared have been marked in evidence; but before that can be done, proof of the records' authenticity and identity must be established. It is for this reason that the accountant must discover all that he can about the nature of the debtor's records and the identity of the employees and other personnel associated with him in his business.

The Role of the District Attorney's Office

The importance of laying a proper foundation for the admission in evidence

of books of account is set forth in an Appellate Division decision (*People* v. *Semenza,* 221 A.D. 79 (1927). In that case the court reversed a conviction for a violation of Section 1293b—the issuance of a false financial statement. The trial court had admitted book entries of creditors in evidence for the purpose of establishing the liabilities of the debtor at the date of the financial statement. The higher court ruled that such evidence was improperly introduced, since there was no preliminary proof or a proper foundation laid for the admission of these books.

The defendant in the case cited was in the retail paint business. In a statement to a credit association he set forth that his accounts payable were $5,100. Later investigation developed that this liability actually totalled $7,901. Five witnesses representing wholesale paint dealers testified that at the date of the statement the defendant owed their employers sums totaling more than $5,100. The court said, on pages 80 and 81:

> "No person was called who knew the facts with reference to these transactions. The proof was made through the medium of book entries. There was no foundation laid for the use of these books either to refresh the recollection of the witnesses as to transactions in which they had participated, or to introduce the books as evidence of the debts themselves. . . .
>
> "A book entry is not proof if better proof can be had. Although it is not possible to prove the existence of the fact except by a book entry recording it, it is still no proof unless it is first shown to be reliable, trustworthy and probably true by evidence other than the record itself which lays the foundation for its acceptance.
>
> "The use of book entries as primary evidence is made competent where they are shown to have been made wtih such automatic regularity and truthfulness by the accountants who kept them or who made the entries as to indicate verity in themselves. . . .
>
> "The proof therefore lacked the necessary foundation in these respects. It was not shown that direct evidence of the transactions resulting in the debts could not be produced. No testimony was had as to when the book entries were made nor as to how the book entries which were offered in evidence were compiled. They were not shown to have been kept in the regular course of business according to any adopted system. The books were not shown to have been original entry books and may have been transcripts of others. There was no proof that any of the goods, the subject of the debts, were ever ordered or delivered, or that they were or the value fixed, or that there was any agreement about the prices charged by the entries. That the books were reliable and probably correct was not shown by any person who ever settled according to their terms."

This case, in addition, points up the importance of preserving auxiliary records from which entries in books of account are made.

It might be mentioned, in passing, that in a situation such as is described in the *Semenza* case, the District Attorney would investigate and collect the evidence necessary to establish the falsity of the statement. In many instances, facts important to the prosecution cannot readily be obtained by the complainants, but can only be established through the prosecutor's own investigation.

The District Attorney cannot proceed on mere surmise and suspicion. Reasonable suspicion, or belief that a crime has been committed, will afford a basis for the prosecutor and his accountants to pursue all avenues of investigation and track down all leads. It should be remembered that a criminal case requires a higher degree of proof than a civil action, where the plaintiff can succeed with a preponderance of evidence. In a criminal case the guilt of a defendant must be established beyond a reasonable doubt.

Suspicion is sometimes cast against a debtor when the accountant discovers variations or shortages of inventory predicated upon an application of the gross profit percentage test or other theoretical accounting method. In the absence of clear concrete proof as to variations between the represented inventory and the actual inventory, a charge of larceny or the issuance of a false financial statement or other crime, based upon such proof alone, cannot be supported for it is based generally on surmise. Many factors can conceiv-

ably exist that would destroy the validity of the accountant's hypothesis.

The prosecutor cannot proceed based on some suspicious facts and then relax and require the defendant to offer an explanation of his innocence. The burden is completely and entirely on the prosecution; the defense has no duty to explain away the case.

Delay in proceeding with a complaint is sometimes fatal to a successful prosecution. I recall a case which came to the attention of the District Attorney about two weeks before the expiration of the Statute of Limitations. The debtor was alleged to have issued a false financial statement. He maintained that he knew nothing of the contents of the statement, that it had been prepared by his accountant, and that he had signed it relying completely on his accountant's veracity. This could not be disputed, since the debtor's accountant had died a short time before creditors made a complaint to the District Attorney. The Grand Jury refused to indict. It is of course quite clear that had timely action been taken, the facts in this case could have been properly resolved.

This illustration also serves to demonstrate the importance of establishing whether or not the debtor had any familiarity with his records and whether or not he was cognizant of the facts set forth in any financial statement.

Once counsel for the creditors is satisfied that a complaint to the District Attorney is warranted, that complaint should be made as soon as possible. Any delay works only to the advantage of the defendant. Bear in mind that the Statute of Limitations for misdemeanors is only two years. Trails and memories grow cold, witnesses may become unavailable, and essential records may be lost or destroyed.

The success of a prosecution for a business fraud will often depend on the promptness with which action is taken and on the care and professional skill of the accountant. Without the aid of the vigilant, conscientious and scrupulous accountant, law enforcement agents at times cannot hope to succeed. As accountants, we have long been in the front lines in the battle against business frauds. We must maintain that position, and even gain ground; for our profession is particularly well qualified, by virtue of our education and experience, to aid the business community in ridding itself of the vultures who prey on our economy and who bring fear and financial disaster to innocent victims.

The District Attorney's office is fully prepared and ready to act promptly and vigorously. We have a duty, not only as citizens, but as members of an honorable profession, to cooperate fully with the authorities so that wrongdoers may take heed that their crimes will not go unpunished.

AN ADIRONDACK VIEW

Color. When the mountains are white it is Winter. When they are light shades of green it is Spring. When these greens are darker it is Summer. And when they are flaming reds and yellows it is Fall.

Nature uses color for its work. We could use color much more than we do. Are we independent or are we slaves to the red and black typewriter ribbon? Do you use green only for audit ticks? Have you put an oil painting in your office lately? Do you use color as part of your accounting system work?

Man alive! Now those dull and drab gray report covers of mine will have to be replaced with ones that are a nice strong shade of blue.

LEONARD HOUGHTON
"Adirondack Chapter"

Retention Order of the Accountant in Insolvencies and Bankruptcies and Petition for Compensation

By Harold S. Gelb, C.P.A. and Irving Goldberger, C.P.A.

This paper indicates the manner in which accountants may be duly retained in the various types of bankruptcy proceedings, how the scope of their work therein is defined, and how their compensation therefor is protected.

Introduction

For purposes of this paper, we will limit our comments to their applicability under the United States Bankruptcy Act, as administered in the Southern District of New York. This Act encompasses the various types of bankruptcy proceedings of which Chapters I through VII (pertaining to Ordinary Bankruptcy), Chapter X (Corporate Reorganizations), and Chapter XI (Petition for Arrangement) are the most frequently encountered by accountants.

When proceedings are instituted by or against a debtor under any of these chapters, all matters pertaining to the affairs of the debtor immediately come under the jurisdiction of the courts, and from that time, the accountant, as well as other interested parties, must comply strictly with regulations and requirements as outlined in the aforementioned Bankruptcy Act.

Irving Goldberger, C.P.A., is a member of the Society, and is currently serving on its Committee on Bankruptcy Procedure.

He is associated with Roberts & Leinwander Co., CPAs, and is in charge of the Insolvency and Reorganization department of that firm.

Harold S. Gelb, C.P.A., is associated with the firm of S. D. Leidesdorf & Co., CPAs. He is a member of the American Institute of Accountants and the New York State Society of Certified Public Accountants and is currently serving on the Society's Committee on Bankruptcy Procedure.

This paper was presented at a technical meeting of the Society held on May 21, 1953, under the auspices of the Committee on Bankruptcy Procedure, at the Engineering Societies Building in New York City.

Petition for Appointment of Accountants

For the accountant to obtain an engagement in connection with proceedings under the Bankruptcy Act, a petition for appointment of accountants must be filed by the Trustee or Receiver in Bankruptcy or the Debtor-in-Possession, as the case may be, with the Referee-in-Bankruptcy of the United States District Court having jurisdiction. Such petition, when filed by either of the aforementioned parties usually contains the following information:

a) Facts surrounding the particular case.

b) Reasons why an accountant's services are required.

c) Name and address of proposed accountant.

d) A statement to the effect that the designated accountant is qualified to render the required services.

The next step, before proceeding with the engagement, is to obtain an authorization from the Court. This is accomplished through the medium of the Order for Retention.

The Order for Retention

In engagements of this type, it is imperative that the accountant should not proceed before the issuance of a court order authorizing his retention. Any work performed prior to such authorization will not be recognized by the Court when fees are reviewed. It should be borne in mind, however, that mere possession of a court order is no guarantee that payment will be forthcoming. Realizable assets sufficient to provide the necessary funds must be available in the estate of the debtor, and the ultimate fee is subject to approval by the Court.

To obtain a court order, the attorneys for the Debtor-in-Possession or the Trustee or Receiver in Bankruptcy must present a letter from the accountant, who should undertake an initial survey of the debtor's books, records and affairs, so that he can prepare the letter intelligently. This letter should be addressed to the Trustee or Receiver in Bankruptcy or the Debtor-in-Possession, as the case may be, in affidavit form, and should contain the following information:

a) The accountant's name, business address, his professional qualifications, and, to the best of his knowledge, his relationship to, or business association with, any attorney, creditor, the bankrupt or debtor, or any other party to the proceedings.

b) Whether he has already rendered any service as an accountant to the bankrupt, receiver or trustee; the extent thereof, and whether or not he is a creditor of the estate.

c) Finally, the letter should contain an outline covering the nature and extent of the services that he proposes to render, his estimated fee therefor, and the basis for such estimate. Where the accountant has previously rendered services to the debtor, he should also state the extent of his familiarity with the books, records and affairs of the debtor.

After receipt of this letter, the attorney for the Trustee or Receiver in Bankruptcy or for the Debtor-in-Possession will prepare and submit to the Court, for its approval, an order for retention of the accountant in which he will incorporate the information contained in the affidavit submitted to him by the accountant. If the Court approves the retention of the accountant, it will enter the order, confirming the scope of the services to be performed, and the maximum compensation to be allowed for such services.

After the order is entered, the accountant should review the scope of his audit as contained in an entered copy of such order. This is extremely important because occasionally the Court will instruct the attorney for the Trustee to make changes in the order submitted for the retention of the accountant, which will affect the scope of the accountant's engagement, and the attorney may not have advised the accountant of such change. Failure so to inspect the court order may result in a serious monetary loss to the accountant, who might have proceeded on the basis of his original understanding of the order as applied for, only to discover after his work has been completed that the Court had modified the extent of his engagement. This may necessitate the performance of additional services by him.

The scope of the audit as outlined in the court order should be followed as closely as possible because deviations therefrom will be scrutinized by the Court, and any time spent in the performance of services not described in the court order may not be recognized

by the Court in fixing allowances for compensation.

There may be cases when, because of conditions unforeseen at the time of estimating the cost of services to be rendered, time in excess of the estimate will be required to complete the engagement. When such cases arise, it is essential for the accountant to request the attorney for the Trustee or Receiver in Bankruptcy or for the Debtor-in-Possession to obtain for him a supplemental court order fixing additional compensation. Likewise, in the event of a transition by the debtor from one chapter of the Bankruptcy Act to any of the others, it is necessary to obtain a new Order for Retention because the prior court order applied only to work performed under the proceedings for which it was originally entered.

The accountant, having in his possession the Order for Retention, is now ready to commence the examination of the debtor's books and records.

Time and Performance Records

During the progress of the engagement, it is important that the accountant maintain adequate time and performance records in as much detail as practical. Such records may be essential at some future date, in the event that his fee (as requested in the Petition for Compensation) be contested. These records should contain, as a minimum, the following data:

a) Date and description of work performed.

b) Name, classification and per diem billing rate of staff member performing such work.

c) Time spent in performance of the work.

Petition for Compensation

At the conclusion of the engagement, the accountant, in order to collect his fee, must prepare in affidavit form, a Petition for Compensation. This petition should be filed with the Court having jurisdiction over the pending proceedings, and should contain the following information:

a) The name and address of the accounting firm and names of the partners.

b) A statement of the authority under which the accountants entered into the engagement.

c) The date of commencement of the examination.

d) An itemization of the services rendered and the exhibits and schedules presented in the report. Such itemization should follow closely the proposed steps as outlined in the Order for Retention.

e) The amount of compensation requested with a summary of days worked, classified by the grade of the accountant and his per diem billing rate. (This may not exceed the maximum compensation fixed in the Order for Retention.)

f) The petition should recite the accomplishments of the services rendered, in the light of benefits obtained by the estate therefrom.

g) Statement under oath by the accountant (or partner in the case of a firm) with respect to his knowledge of the contents of the petition.

In conclusion, it is strongly emphasized that the accountant adhere strictly to the formal requirements of the Bankruptcy Act as administered in the courts of the various districts, in order that he be assured of compensation for services rendered to the bankrupt estate.

Relationship of the Fees and Costs of Small Practitioners

By Benjamin M. Sigel, C.P.A.

By means of a hypothetical case study, this paper seeks to analyze the relationship of the costs and fees of a small practitioner.

For the past fifty years our profession has directed its energies and creative thinking to the best interests of business and industry. We have constructed accounting systems with the care of master craftsmen. We have measured profits and losses and prepared analytical chartings of their variations. We have given counsel during distress and guidance in times of great indecision.

Recently, a trend has begun to divert a bit of this energy and thinking to our own welfare. We have started to examine ourselves, to review the economics of our own profession. This financial introspection is long overdue for it lags far behind the demands of our times and the urgent needs of a substantial number of us.

Benjamin M. Sigel, C.P.A., is a member of our Society and the president of its newly-formed Richmond County Chapter. He also serves on the Committee on Problems of the Individual Practitioner and the Committee on Chapter Expansion.

Mr. Sigel was graduated from The City College (New York) School of Business and Civic Administration in January, 1936, with the degree of B.B.A. In 1946, he received the degree of M.C.S. from Benjamin Franklin University. He is a partner of Sigel & Lipcon, a New York public accounting firm.

This paper was delivered by Mr. Sigel before the technical meeting of the Society held on May 7, 1953, at the Engineering Societies Building, under the auspices of the Committee on Problems of the Individual Practitioner.

The Problem of Fees and Costs

Whenever individual practitioners meet, discussion invariably turns to the difficult problem of fees and costs, not only because it makes for good conversation but also because there is an earnest groping for sorely-lacking information.

To the outside world, we are known as astute fact-finders. In the light of this well-earned reputation, it is amazing that we do not possess substantial data on fees and costs. For this is an aspect of our activities vital to our professional standing and to the well-being of us all.

Most technical papers on this subject are expressed in lofty and nebulous terms only. What comes to my mind is how can one discuss accountants' fees and costs without some concrete dollars-and-cents information.

For years now, we have failed to bring this problem forth into the cold light of day. Some people feared it, others considered it beneath our professional dignity. Whatever the cause and whatever the reason, there is inherent danger in this attitude. With an increasing number of accountants entering the field, if proper guideposts are not established unequivocally, the profession risks sub-standard economic levels. Any small practitioner can give a clear description of this danger.

Let no Society member take the position that this situation does not affect him. Like a linked chain, our profession is as strong as the weakest individual in it. The welfare of any one of

us is the problem of all of us.

Our technical meeting tonight is a good sign indeed. It is an indication that we are ready and willing to come to grips with realities. It is quite understandable that I approach the task at hand with some hesitation. There are also considerable doubts in my mind as to best methods. In any case, I do not intend this paper to be a dissertation. Rather is it an introductory exploration.

In studying mathematics years ago, I was taught that when you have a difficult problem, try to reduce it to its simplest terms. I shall apply this principle here. In this instance, the simplest terms are the fees and costs of a sole practitioner with a modest practice.

A Hypothetical Case Study

To accomplish the task, I have decided to use the case-study method. There is one difference: This case is pure fiction. I shall call our accountant Charles Crossfoot. He is a figment of my imagination. To the best of my knowledge, he does not exist nor do I know anyone like him. But I do not guarantee that any resemblance to someone here is an unintended coincidence.

Assumed Facts

The facts with which I shall clothe Charles are also entirely fictional. I have chosen them only because they seem proper and logical to illustrate an example.

Mr. Charles Crossfoot is a certified public accountant. He is 35 years old, married, and the father of two children. He and his family live a quiet life in their small home in Long Island.

Charles has a practice located in and about New York City consisting of a variety of small to moderate-sized businesses. He maintains an office in a single room, sub-let from a Manhattan firm of attorneys. He employs a junior accountant for audit details and write-ups. One of the secretaries of the law firm does his typing and filing on a part-time basis. Mrs. Crossfoot has charge of the administrative details at home. She also helps with report typing and other matters, especially when the work-load becomes heavy.

Charles does not use his car for professional purposes and has no need for lavish entertaining of his clients. All his expenses are incurred judiciously and with an eye to economy.

For purposes of computations, we shall peg Mr. Crossfoot's net income at \$175.00 per week or \$9,100.00 annually. Charles expects his practice to yield this needed amount.

Now let us convert these facts into dollars-and-cents figures and use the component parts to prepare a break-even financial statement.

Salary of junior accountant	\$3,000.00	
Salary of part-time typist	1,560.00	
Total salaries		\$ 4,560.00
Other expenses:		
Rent	\$1,200.00	
Travel—carfares, taxis, train, etc.	480.00	
Entertainment and gifts	600.00	
Postage and mailing expenses	300.00	
Telephone and telegrams	240.00	
Accounting supplies	180.00	
Stationery and printing	180.00	
Tax services, pamphlets, and technical books	200.00	
Taxes (other than income taxes)	100.00	
Miscellaneous expenses	360.00	
Total expenses		3,840.00
Total salaries and expenses		\$ 8,400.00
Net income requirements of Charles Crossfoot		9,100.00
Gross fee income requirements of Charles Crossfoot		\$17,500.00

Analysis of Facts

We have a set of figures to work with. What analyses can be developed from them? First, we shall compute some percentages based on gross fee income:

Gross fee income.........		100.0%
Salary of junior accountant	17.1%	
Salary of part-time typist..	8.9	
Other expenses	22.0	
Total salaries and costs		48.0
Net income		52.0%

If we stopped at this point, our findings would have very little meaning. Although these percentages have some use to the small practitioner, he has much better working tools at his disposal.

Our real basis for computation is *time,* either by the day or by the hour. Time is the universal language of the certified public accountant since it has like meaning to all members of the profession. It represents grounds for understanding between him and his clients. It has many characteristics of something tangible. It can be added, subtracted, divided, and multiplied. It can be evaluated and it can be recorded.

With this in view, it seems sheer folly for any accountant to fail to keep detailed time records. It does not matter whether he has a staff working for him or he stands alone. The need for this information, for an intelligent approach to his practice, is almost as important as his pencil and his pen.

Coming back then to our example, let us apply time to the figures. In doing so, we are faced with one important variable, the relation that non-chargeable time bears to total time spent in Mr. Crossfoot's practice. There are many factors that have their effect here. Thus, we shall have to make another assumption. Let us say that Mr. Crossfoot is very fortunate: only 10% of his junior's time is non-productive. On this basis, we determine that his assistant spends 230 productive days of the year. The computation is as follows:

Number of days in a year........		365
Eliminate non-working days:		
Sundays throughout the year....	52	
Vacation—two weeks	10	
Saturdays—half of the year only	26	
Saturdays—half days for the balance of the year	13	
Legal and other holidays	9	
Total non-working days....		110
Balance of days available		255
Non-chargeable time (10%)		25
Number of productive days		230

Dividing the junior's salary of $3,000.00 by 230 yields the direct cost of approximately $13.00 per day. Charles figures that he charges for his junior's time at the rate of $30.00 per day. If this were so, based on direct chargeable time, the salary would amount to 43.3% of gross income earned by the junior ($13.00 cost per day divided by $30.00 income per day). We shall see if this is true, subsequently.

We are now in a position to make some more interesting observations about the practice of Mr. Charles Crossfoot. It has been determined that the junior works 230 productive days at the desired chargeable rate of $30.00 per diem. In that case, total income for the year derived from his assistant's efforts would amount to $6,900.00 (230 days multiplied by $30.00 per day). Subtract this sum from total billings of $17,500.00, the total income previously arrived at as the break-even point. The balance is $10,600.00 representing what Charles would gross directly through his own efforts.

Mr. Crossfoot spends less productive days than his junior. Remember that he has an overall practice to take care of, administrative problems to solve, and prospective clients to see. Let us assume that his records show 210 days of chargeable time. Dividing these days into the apportioned gross income of $10,600.00 (the amount we assume Charles earns directly) produces a per diem rate of approximately $50.00.

Now note that the figures do not seem to make sense. If the time of the

junior is chargeable at the rate of $30.00 per day then the time of Charles is certainly worth more than 166⅔% as much. It is more probable that Charles is not getting the desired rate for the time of his junior.

If we assume a per diem rate of $25.00 for the junior, then the mathematics bring forth a figure of about $56.00 for Mr. Crossfoot. This proportion seems more logical. However, in accepting this relation between Charles and junior, we must now adjust upward the direct salary cost. The per day salary cost of junior we determined to be $13.00. The per day income of junior we accept as $25.00. Dividing cost by income produces the fact that 52% of the income earned by Charles from the efforts of the junior go to pay the junior.

Apportionment of Overhead

Our last computation is the apportionment of overhead between Charles and his junior. It can be done by two different methods: Either we apportion on the basis of productive days spent by each one, or we apportion on the basis of respective gross income billed through the direct efforts of each one. The results obtained are quite different.

In the *first* method, we note that Junior spends 230 productive days and Charles 210 days. Total overhead costs as previously determined (including the part-time typist but excluding Junior's salary) amount to $5,400.00. The sum of productive days worked by both men for the year is 440. Junior's part is 52.3%. Applying this percentage to the overhead results in an apportionment to junior of almost $2,825.00.

In the *second* method, we observe that Junior is responsible for gross income of $5,750.00 (230 days @ $25.00 per day). Total gross income is $17,500.00. The proportion that $5,750.00 bears to $17,500.00 is 32.9%. When we multiply this percentage by total overhead it yields about $1,780.00, as an apportionment to junior.

Let us put these two alternatives side by side.

	Method #1 based on time	Method #2 based on billing
Gross income earned by junior (230 days @ $25.00 per day)	$5,750.00	$5,750.00
Salary paid to junior	3,000.00	3,000.00
Balance before apportionment	$2,750.00	$2,750.00
Overhead expenses	2,825.00	1,780.00
Net (loss) attributable to Junior—Method #1	$(75.00)	
Net income attributable to Junior—Method #2		$ 970.00

It well might be reasoned that an apportionment of overhead to the junior based on Method #1 is not logical here, since it places equal importance on the time of both men. Therefore, let us choose Method #2 which is the apportionment based on respective gross incomes.

Income and Cost Statistics

We are now in a position to provide Junior's income and cost figures for the day. Also, the figures have been converted to a per hour basis, using a 7½ hour day.

	Total	Amount per day	Amount per hour
Gross income	$5,750.00	$25.00	$3.33
Salary paid	3,000.00	13.00	1.73
Balance before overhead	$2,750.00	$12.00	$1.60
Overhead apportionment	1,780.00	7.75	1.05
Net income—attributable to junior	$ 970.00	$ 4.25	$0.55

By removing income and costs allocated to the junior from the totals, we are able to make similar computations for Charles.

	Total	Amount per day	Amount per hour
Gross income	$11,750.00	$56.00	$7.45
Overhead apportionment	3,620.00	17.25	2.30
Net income attributable to Charles (without junior)	$ 8,130.00	$38.75	$5.15

Summary and Conclusions

It may be wise now to pause for a recapitulation. In doing so we shall eliminate the trimmings and furnish the essential facts and figures only. Also, a little editorializing is in order.

A fictional certified public accountant was created and given substance. He has a wife and family for inspiration. He has a junior accountant and a part-time typist to help him get the work load done. We have given him an office as a base of operations, and he has all the accoutrements with which to conduct his modest practice.

Charles grosses about $1,460.00 a month. From this amount he pays his junior $250.00, his typist $130.00, and he clears all other expenses at $320.00 per month. His monthly net is about $760.00, or 52% of total billings.

No longer can Charles have illusions of grandeur about his practice. Now he knows that a productive day of his junior's time yields not $35.00, and not $30.00, but $25.00 per diem, as compared with the direct salary cost of $13.00. Thus, he learns that 52% of the actual rate per day for the junior goes to pay his salary. Another surprising discovery is the fact that his small overhead is chargeable to the junior at the rate of $7.75 per day. All costs total $20.75, leaving him a net profit from junior's activities of $4.25 per diem.

In the final analysis, he realizes that he is not being compensated sufficiently for the supervision and responsibilities he has assumed in employing a junior accountant.

The figures have produced another eye-opener. Charles had been going around town beating his chest and declaring to everyone that he charges at least $75.00 per day, for his own time. Now he knows that it just is not so. His figures show the rate to be $56.00 per day.

Charles always thought that his overhead was a small item not to be reckoned with. The figures show differently. Over 30% of his own chargeable rate goes to pay his overhead.

It has been brought home to Charles, in unmistakable terms, that time plays a decisive role in producing these financial results. For example, a greater percentage of non-productive time would yield less favorable figures.

At the outset, before plunging into these statistics, I commented that this paper is intended only as an introductory exploration on the subject of the relationship of fees and costs for the small practitioner. Certainly, I hope that the case of Charles Crossfoot is not construed as a standard. It cannot be taken as a classic example of an extremely successful CPA. On the other hand, he is not the lowest man on the totem pole, either. Where he stands I do not know nor does it matter.

My purpose in setting forth the facts and figures of Charles Crossfoot was not to establish his relative financial success. My purpose was to display the integration of income and costs of a small practitioner and to develop a better understanding of their meaning. I also wanted to point up the interplay between time and money.

If in trying to achieve these ends I succeeded in whetting your appetite for more data and more information, then much good has been done. We have only begun to learn about ourselves in this respect; the time for more knowledge is now. Let us get on with the job.

Employee Profit-Sharing and Savings Plans

By PHILIP BARDES, C.P.A.

Profit-sharing plans, like other employee benefit programs, are playing an increasingly important role in our modern corporate economy. As of February 28 of this year, the total number of rulings issued by the Treasury as to the qualification of all types of plans exceeded 20,000. Profit-sharing plans constitute about 30% of the number now in operation. Profit-sharing plans constitute an increasingly larger percentage of all plans being put into effect. This discussion will be largely devoted to exploring the reasons for this trend.

Definition of Profit-Sharing Plan

The regulations define a profit-sharing plan as "a plan established and maintained by an employer to provide for the participation in his profits, by his employees or their beneficiaries, based on a definite predetermined formula for determining the profits to be shared and a definite predetermined formula for distributing the funds accumulated under the plan after a fixed number of years, the attainment of a stated age, or upon the prior occurrence of some event such as illness, disability, retirement, death, or severance of employment." [1]

Applicability of General Rules

The same basic rules as to the qualification of plans, including the nondiscrimination features, are equally applicable to pension and profit-sharing plans. The beneficiaries of profit-sharing trusts are taxed in the same manner as the beneficiaries of pension trusts.

PHILIP BARDES, C.P.A. and member of the New York Bar, is tax partner in the New York office of Lybrand, Ross Bros. & Montgomery, CPAs and editor of *Montgomery's Federal Taxes—Corporations and Partnerships.*

This paper was presented by Mr. Bardes at the 20th Annual Conference of the Society, held at Saranac Inn, New York, on June 22, 1953.

Incentive Features of Profit-Sharing

The incentive feature of profit-sharing plans is one of the principal inducements to their selection. Since the benefit which each employee derives under the plan is directly related to the profits earned by the company, the employee is encouraged to exert his best efforts to increase the earnings of the company through more efficient performance. Moreover, labor turnover may be reduced, and incentive heightened, especially on the part of lower-paid employees, by providing for distributions prior to retirement under the plan. For example, the employee may, subject to certain conditions, receive benefits after the expiration of a fixed number of years (minimum two) or upon attaining a stated age, or the occurrence of illness, disability, death or severance of employment. In this respect the profit-sharing plan differs from the usual pension plan where the deferred wages currently paid by the employer, in the form of a contribution under the plan, ordinarily become available to the employee only if he lives and remains in the employ of the company until retirement.

Where a distribution is made to an employee prior to separation from employment, the amount distributed to

[1] Reg. 111, Sec. 29.165-1.

him is taxable as ordinary income. The benfit of the capital gain treatment of a lump-sum distribution paid upon termination of employment is not available in this case. This factor will not usually be significant, however, in the case of lower-paid employees.

Avoidance of Fixed Dollar Commitment

In a case where the company's earnings are of an erratic nature so as to indicate the advisability of avoiding fixed annual financial commitments, the profit-sharing plan offers definite advantages. Since the employer's contribution is usually determined by a formula based upon profits rather than upon actuarial computations of the amount needed to provide the anticipated benefits, there is no commitment to pay a certain annual amount which the company must meet even in a loss year.

Formula Requirements

Apart from the flexibility inherent in profit-sharing plans, the courts have exercised a further liberalizing influence on the question of how fixed the formula itself is required to be under such a plan. In a leading case involving a profit-sharing trust for the employees of *The Lincoln Electric Company*[2], the Court of Appeals for the Sixth Circuit held that a plan under which the employer made a single contribution of $1,000,000, with no provision for subsequent payments, qualified under section 165. The Commissioner had contended that the contribution to the trust was not based upon a definite predetermined formula as required by the regulations[3] and that the program was not a permanent one within the meaning of the regulations[4] since there was no provision for recurring contributions by the employer. The court held that the contribution of $1,000,000 was definite and predetermined in accordance with the regulations and that the permanency requirement did not necessarily require recurring contributions. The Treasury, however, is not following the *Lincoln Electric Co.* case.

On the basis of its reversal by the Sixth Circuit in *Lincoln Electric Co.*, the Tax Court now holds that it is unnecessary to have a definite predetermined formula for contributions to a profit-sharing trust[5]. In the *Produce Reporter* case, the company's contributions to the fund were upheld as deductions where, under the terms of the plan, the company could contribute such amounts as it "may at any time see fit." The position of the Tax Court is that the purposes of section 165 may be effectively carried out in the absence of any specific formula requirement. The Treasury has refused to acquiesce in the *Produce Reporter* decision and the case is now on appeal.

The matter of definite formula requirements has not yet been settled despite the favorable trend of judicial opinion. It would therefore be inadvisable at this time to set up a profit-sharing plan without the inclusion of a definite formula. It would likewise be inadvisable to make a single contribution to a plan without provision for subsequent contributions. This is particularly true in view of the chances that approval may now be obtained allowing amendments to existing plans and to the percentage of profits required to be contributed under the plan.

In the *E. R. Wagner Manufacturing Co.* case[6], the company's profit-sharing plan provided for annual contributions equal to 35% of its net profits, subject to the limitation of 15 per cent of participating employees' compensation.

2 *Lincoln Electric Co. Employees' Profit-Sharing Trust* v. *Com'r*, 190 F. (2d) 326.
3 Reg. 111, Sec. 29.165-1.
4 *Ibid.*
5 *Produce Reporter Co.*, 18 T.C. 69 (NA).
6 18 T.C. 657 (A).

Amounts based on this formula were paid into the trust during the World War II excess profits tax years. In 1946, the company sought to reduce the contribution formula from 35% to 10%. The Treasury refused to sanction the amendment on the ground that the plan would not then meet the permanency requirement of the regulations. The taxpayer nevertheless amended the plan in 1946 to reduce the formula to 10%, and its contributions thereafter were based on that figure. The Tax Court acknowledged that the termination of the excess profits tax may have prompted the reduction in the employer's contributions. It nevertheless upheld the deductibility of the contributions and the tax exempt status of the plan. The Court stated that it could find nothing in the Code or regulations which prevented the taxpayer from changing its formula to reduce the percentage of profits contributed to the trust. The Commissioner has acquiesced in the result in this case. It therefore seems clear that taxpayers will have some measure of flexibility with respect to amendments to profit-sharing plans.

The same rule should be applicable where circumstances indicate that increased contributions could be made to the trust. Where a taxpayer presently has a formula that it wishes to change, so as to increase the contributions under the plan, the change should be made as a formal amendment to the plan. The courts have uniformly held that where a definite formula exists, amounts paid in excess of the formula are not deductible either under section 23(p) or under 23(a) as an ordinary and necessary business expense.[7] Moreover, such excessive payments are not available as carry-overs and are not deductible in any subsequent year.[8]

Forfeitures Inure to Remaining Employees

A principal advantage of the profit-sharing plan, so far as the employee participants are concerned, arises from the treatment accorded forfeitures by employees leaving the company's employ before their shares have fully vested. Because the benefits under a pension plan must be predetermined, shares in the fund released by forfeiture cannot go to augment the benefits of the remaining employees, but are available only to the company as a reduction in the current payments required under the plan.

Profit-sharing plans, on the other hand, may and usually do provide, that amounts attributable to forfeitures may be apportioned to the other participants. The result is that a substantial proportion of the benefits distributed by a profit-sharing trust, to an employee who continues in the company's employ, very often consists of amounts originally paid into the fund on account of employees who have subsequently left the company.

Advantages to Smaller Companies

It is a mistake to believe that the trend toward profit-sharing plans is confined to the larger corporations. They may be used with equal effectiveness by the smaller closely-held company whose principal stockholders are the active managers of the business. This was not always the case. The Treasury at one time held that a plan was considered to be for the benefit of shareholders and not for the exclusive benefit of employees, if contributions under the plan, with respect to employees each of whom owned more than 10 per cent of the company's stock, exceeded in the aggregate 30 per cent of the total company contribution.[9] The effect of this ruling was to discourage

7. *Wooster Rubber Co.*, 14 T.C. 1192, rev'd on other grounds, 189 F. (2d) 878; *Gross-Given Manufacturing Co.*, 99 Fed. Supp. 144; *McClintock-Trunkey Co.*, 19 T.C. No. 42.

8 I.T. 4055, 1951-2 C.B. 30.

9 I.T. 3674, 1944 C.B. 315.

the adoption of plans by many companies whose principal stockholders actually managed the business.

The Tax Court, however, in the *Volckening* case,[10] specifically disapproved the Treasury's "30 per cent" rule as an unwarranted extension of the requirements of the statute and upheld a plan under which amounts paid on behalf of two employees who owned 97 per cent of the company's stock constituted during the years involved 58 per cent and 53 per cent, respectively, of the total contributions paid by the company on behalf of its employees. During this period the company employed from 9 to 15 persons, 8 of whom were covered under the plan including the 2 stockholders. The plan was not discriminatory since contributions bore a uniform relationship to the regular rate of employees' compensation. The relatively high percentage of the contributions paid on behalf of the two stockholder-employees was attributable to the higher salaries and greater age of the two individuals. Although the *Volckening* case involved a pension plan, its principle is equally applicable to profit-sharing plans.

The Commissioner has acquiesced in the *Volckening* decision. If a plan is therefore a *bona fide* profit-sharing plan and otherwise meets the requirements of section 165, it will qualify under that section notwithstanding that a large part of the company's contributions will be for the benefit of employees who are important shareholders. The availability to partners, as shareholder-employees of a corporation, of a substantial participation under a qualified section 165 plan, is one of the important tax advantages to be achieved by the incorporation of a partnership.

Rules of Deductibility

The Code limits the employer's income tax deduction for contributions paid under a profit-sharing plan to 15 per cent of the compensation otherwise paid or accrued during the taxable year to the employees covered by the plan. Contributions required by the formula in excess of the 15 per cent limit may be carried forward and applied to succeeding years in which the contribution paid is less than 15 per cent of the compensation otherwise paid or accrued during that year. If the contribution paid is less than the 15 per cent limit, the difference may be carried forward and applied in succeeding years so as to permit the deduction of contributions paid in excess of the 15 per cent limit of that year. There is a 15 per cent limit per annum on the additional deduction, making a total of 30 per cent for any one year. There is no limit to the number of years "contribution carry-overs" and "credit carry-overs" may be carried forward.

A problem arises in a situation where, by reason of a temporary cash shortage, a company is unable to make its full contribution within the 60-day period following the year of accrual, as specified by section 23(p)(1)(E) of the Code. If the company pays the balance of its contribution subsequent to the 60-day period, say, on May 1, is it entitled to a deduction in the year of payment with respect to the liability for the previous year? The answer is in doubt. The Treasury is expected to issue some pronouncement dealing with this matter in the near future.

A related problem arises where the company's profit-sharing contribution is based upon taxable, rather than book, income. Suppose that taxable income for a prior year is revised upward upon a revenue agent's examination. If the company is required to make an additional contribution for that prior year in accordance with its formula, the deduction for such additional amount in the prior year would be doubtful. By including this additional contribution, however, as part of

[10] *Volckening, Inc.,* 13 T.C. 723(A).

the current year's contribution, under the terms of the formula, along with amounts to be contributed based upon reported income for that year, the deduction for the additional contribution can be assured.

Another problem that frequently arises with respect to the rule that payments into the trust must be made within 60 days after the close of the taxable year is that of arriving at the correct amount of the corporation's net income within so short a period, frequently before the annual audit has been completed by the company's auditors. The Treasury has recognized this difficulty and has ruled that the use of estimated net income, determined in accordance with established accounting principles consistently applied, and certified to by the accounting or other responsible officer of the company, is acceptable for the purpose of determining contributions to the profit-sharing trust.[11] The Treasury cautions, however, that an arbitrary estimate or haphazard guess of net income is not acceptable. Further, if a particular method of arriving at estimated net income is once adopted, approval should be requested from the Treasury before a change is made.

Integration with Social Security

Mimeograph 6641[12] sets forth the rules for determining whether a profit-sharing plan is integrated with the Social Security Act as required by section 165 of the Code. These rules are only applicable where under the terms of the profit-sharing plan there is a minimum compensation requirement which excludes employees earning less than $3,600 per year, or where, for purposes of the plan, compensation below the minimum is treated less favorably than compensation above that amount.

Paragraph 19 of the Mimeograph provides that profit-sharing plans will be considered integrated if the following requirements are met: (1) the employer has no other plan involving integration, (2) the plan provides for benefits only upon retirement or separation from service, (3) all contributions are allocated on a nondiscriminatory basis and (4) the amount of employer contribution plus forfeitures allocated to any participant in any year does not exceed 9⅜ per cent of the actual compensation in excess of the minimum compensation level, except that a minimum allocation not exceeding $60 may be provided for each participant in any year that allocations are made.

If a plan was in effect prior to May 3, 1951, however, which has been approved by the Treasury as meeting the requirements of section 165(a), it will be considered integrated, provided that Treasury approval has not been modified or withdrawn and that no changes have occurred in the plan which could increase the allocations of higher-paid employees.

Investment of Trust Funds

No specific limitations are imposed by the Code on the investments which may be made by a trustee of a profit-sharing trust. The underlying principle is that investments must be made for the exclusive benefit of employees or their beneficiaries. All of the safeguards that a prudent investor would look to should exist in the case of the trust.

For the trust to invest in the securities of the employer, the Treasury requires that a specific provision to that effect must be made in the trust instrument.[13] Such investment must also be permitted under local law of the jurisdiction to which the trust is subject. Full disclosure must be made to the Commissioner of the reasons for such investments and the conditions under which they are made. The notification to the Commissioner includes the filing

[11] PS No. 46, Feb. 10, 1945.
[12] 1951-1 C.B. 41.
[13] PS No. 49, June 16, 1945.

of balance sheets, income statements, surplus analyses and a schedule of trust investments.[14] An advance ruling may be obtained from the Commissioner as to the effect of such investments on the qualification of the plan.

The purchase of a company's stock by a profit-sharing trust may serve, in effect, as an added incentive feature. Not only may the amounts contributed to the fund by the company be dependent upon profits, but the value of each employee's share in the trust, in the form of company stock, will presumably rise in relation to the success of the company's operations. Besides there may be a definite advantage to the company in having a large block of its outstanding stock in the hands of a friendly trustee. It has even been possible in some cases to arrange for the eventual transfer of control of a close corporation to an employees' profit-sharing trust, thereby solving, in at least one instance, the principal estate planning problem of the company's sole stockholder.

There are tax advantages to an employee-beneficiary of a profit-sharing trust where distributions are made to him within one taxable year upon separation from service. To the extent that such distribution exceeds the amount contributed by the employee, it is taxable to him only as long-term capital gain. Where, however, the distribution includes securities of the employer corporation (or of its parent or subsidiary) which have appreciated in value while held by the trust, no tax is imposed upon the distributee with respect to such unrealized appreciation when he receives the stock. The basis in his hands is the cost of such stock to the trust. Only upon the ultimate sale of the stock by the distributee is a capital gains tax imposed on the appreciation in value of the stock. If the employee retains the stock until his death, the shares will take a basis of fair market value at the date of death and the unrealized appreciation will never be subjected to income tax.

[14] Rev. Ruling 33, I.R.B. 1953-6, 47, 52.

Employee Savings Plans

A variation of the profit-sharing plan which is gaining increasing popularity is the so-called thrift or employees' savings plan. Such plans involve voluntary contributions by employees of a certain percentage of compensation, frequently at optional rates, with the amounts contributed usually withheld through payroll deductions. The employer likewise makes contributions to the fund, either on the basis of a percentage of current net profits, or on a "matching" basis whereby, say, the company agrees to contribute 50¢ for every dollar contributed by the employee. In the latter case current earnings are not required for contributions under the profit-sharing plan. Contributions may be made out of the accumulated earnings and profits of the company so that it will not be necessary for the company to withdraw from making contributions in an unprofitable year. In many cases the "thrift" feature is used to supplement already established pension or profit-sharing retirement programs.

From the standpoint of the employee this type of savings plan will provide him with greater retirement benefits than he would otherwise obtain if he sought to provide his own retirement fund or supplement a company pension through individual savings. This is because (1) in order to promote the savings incentive on the part of employees the employer itself makes an additional contribution (2) the employee's savings are invested by the trust and the resulting income is not subject to current tax and (3) economies and minimization of risk are available through participation in group investment as contrasted with the investment of individual savings.

The principal advantage of such plans to the employer lies in the fact that

greater benefits will be received by the employee, a portion of which will be paid for by the employee himself. Further, availability of larger employee benefits may make it unnecessary for the employer to liberalize its already existing retirement program at some future time, at full cost to itself.

Generally plans of this type will not be approved by the Treasury if employee contributions are permitted in excess of 6 per cent of compensation, where employer contributions are geared to the amounts contributed by the employees.[15] Contributions which are required of employees in excess of that figure, in order to obtain matching contributions by the employer, are regarded as burdensome and likely to result in discrimination against lower-paid employees.

An interesting development that has arisen in connection with plans of this type relates to the manner in which the funds held for the account of the employee may be invested. Several plans have offered the employee a choice of investment categories such as (1) the common stock of the company, (2) a diversified portfolio of stocks and other securities of the trustee's selection, (3) United States Government bonds, or (4) shares in a regulated investment company. The employee may direct the investment of his share of the fund in any *one* of the categories or he may allocate his interest among several of the categories. Some restrictions are usually imposed upon shifting in and out of the various categories with too great frequency.

The added flexibility permits the plan to be tailored more fully to individual requirements. Obviously there are wide differences in sensible investment policies for the top-salaried executives of a company, who are probably chiefly interested in the possibilities of capital appreciation, and the lower-salaried employees who are chiefly concerned about an adequate level of retirement income. This development, therefore, holds great promise of obtaining the most effective utilization of funds with respect to the needs of the individual employees involved. While this election of investment categories has arisen chiefly in connection with employee savings or thrift plans, there would seem to be no reason why these principles could not be equally well applied under a straight noncontributory profit-sharing plan.

Conclusion

Qualified profit-sharing plans offer important advantages to a company from the standpoint of both sound business policy and tax savings. The incentive features of such plans strengthen employee morale and encourage efficient performance. The intrinsic flexibility of profit-sharing plans relieves the company of fixed dollar commitments when earnings are poor while resulting in increased contributions when operations are profitable and the company is in a better position to make contributions. The possibility of capital gain upon a distribution on termination of employment, and the postponement of tax upon unrealized appreciation in the company's stock, are especially attractive to company executives. The inclusion of an employee savings feature in the profit-sharing plan has special appeal to the lower-paid employee and may result in substantial additional benefits to both employer and employee.

[15] Rev. Ruling 33, I.R.B. 1953-6, 47, 56.

Costing for the Petroleum Refining Industry

By CHARLES BERLOWITZ

After a brief introduction, the author discusses the more important methods whereby refinery operating costs are distributed to products produced—the joint product method, the by-product method, the replacement value method, the barrel-gravity method, and the gravity-heat unit method. In his opinion, the replacement value method offers the best solution to the problem involved.

Introduction

The birth of the oil industry dates from August, 1859, when Drake's well first began to produce at Titusville, Pennsylvania. Since that date the industry has had a phenomenal growth. Today, it is one of our great power resources, influencing virtually every aspect of our lives.

Today, petroleum threatens to displace coal as our prime source of power. The increasing use of diesel power by our railroads and the oil burner for domestic heating purposes have made serious inroads into fields where, but a few short years ago, coal occupied a prominent place. In addition, the increasing use of combustion power, as exemplified by the automobile, the airplane, the farm tractor, and other such mechanisms, has provided the stimulus for the tremendous expansion the industry has experienced, particularly within the past two decades.

The petroleum industry may be described as having four distinct divisions: production, transportation, refinement, and marketing. While there are a number of independent companies whose energies are devoted primarily to but one of the fields, the industry is dominated by large integrated organizations controlling large oil fields, maintaining their own tankers and pipelines to transport the crude oil, operating large refineries, and marketing the refined products under their own brand names. The industry has required tremendous amounts of capital and by 1944 the net investment in the United States petroleum industry totaled $7.65 billion. This represented depreciated value of physical facilities, not including investment in foreign countries. From the standpoint of invested capital the refining branch ranks second and in 1944 the investment in refineries represented 17.9 percent of the total invested in the entire petroleum industry.[1]

The purpose of the refining branch of the industry is to take a product for which there is little use, namely, the raw crude oil, and convert it into products of high utility such as high octane gasoline, motor oils, and fuel oils. This is usually accomplished in four steps: physical separation, chemical conversion, purification, and the addition of agents. By the application of heat, pressure, and chemical treatment, a

CHARLES BERLOWITZ was graduated from The City College of New York with the degrees of B.S. in Soc. Sci. (June, 1939) and M.B.A. (June, 1953). Between July, 1941, and December, 1945, he served in the U. S. Army. He is now employed by the Internal Revenue Service as Internal Revenue Agent assigned as Collection Officer.

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[1] American Petroleum Institute, *Petroleum Facts and Figures*, 1947, 8th ed., Lord Baltimore Press, Baltimore, p. 197.

series of finished products is obtained which range all the way from cosmetics to asphalt. Crude petroleum is a mixture of thousands of hydrocarbons whose natural boiling points vary from below 0 degrees to over 1,000 degrees Fahrenheit. Using a simple process of distillation, the refiner divides the crude oil into fractions which are obtained at progressively higher boiling points. The principal fractions obtained are gasoline, kerosene, gas oil or distillate fuel oils, and lubricating distillates. By the use of a process known as cracking, kerosene and low-value gas oil are converted into gasoline, gas, and heavy fuel oil. Other chemical processes used are polymerization, hydrogenation, and catalytic reaction. But no matter which process is used the result is the same; namely, that a less wanted product has been converted into one of higher worth. Thus, refining differs from other manufacturing processes which result in a main product and by-products which usually form a fixed ascertainable percentage of the total goods manufactured. Refinement, through the use of chemistry, has been able to keep up with changing demand by varying quantity of each product produced from a barrel of crude petroleum.

Years ago refining was done in batch processes. The number of units of equipment required for each operation was far greater than that of today. As a result, materials in process were transferred through several individual units before they were finally classed as finished. Today, single operating units heating the materials only once or twice at the most, complete the refining to finished products. Paradoxically, this simplification of manufacturing processes has resulted in making the task of the refinery cost accountant much more difficult. He is faced with the problem of allocating costs where processing is accomplished in one complex combined single operation.

Refinery accounting is usually divided into three categories:

1. Accounting control of inventory quantities.
2. Distribution of refinery operating expenses to the operating units.
3. Distribution of refinery operating costs to products produced.

The inventory of a refinery is its crude oil, semi-finished and finished products. In accounting for crude oil quantities, due consideration must be given by the accountant to the fact that crude oil is a liquid which expands and contracts with temperature variations. This is accomplished by adjusting all inventories to a temperature of 60 degrees Fahrenheit. Another allowance made in computing inventory is for basic sediment and water (B.S. & W.). B.S. & W. is found both at the bottom of the tank and in suspension in the oil. Each tank, in which crude oil is stored is gauged before oil is pumped into it and after the pumping is finished. At the time the tank is constructed its capacity is determined. This determination is known as "strapping." Tanks are gauged at least once a day and after determining the intake it is adjusted according to standard measurements for temperature variation from the 60 degree F. norm and for B. S. & W.

Having accounted for inventory, the next problem facing the refinery accountant is the accumulation and distribution of refinery operating expenses. These expenses are accumulated in two ways—by function and by type. Although the control of refinery operating expenses is important, it is well to bear in mind that raw crude oil cost constitutes from 75 to 85 percent of the total cost of all refinery products. Hence, the margin of profit is actually dependent upon what products are obtained from the crude oil rather than upon fluctuations in operating expense.[2]

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[2] National Association of Cost Accountants Bulletin, Dec. 1949, Vol. XXXI, No. 4, Sec. One, J. L. Fox, *Cost Analysis Budget to Evaluate Operating Alternatives for Oil Refiners*, p. 405.

The final category of refinery accounting is the distribution of refinery operating costs to products produced. Its importance is heightened by the fact that, for the refinery to maximize its profit, it must carefully balance its production of finished petroleum products. In an attempt to arrive at accurate costs for finished products several methods have been developed. None has won universal acceptance in the refining industry. What follows is a brief description of the more important costing methods which have been developed by the petroleum industry over a period of years.

The Joint Product Method of Cost Allocation

This method is sometimes referred to as the "weighted selling ratio method", "yield value", and "sales realization method." [3] It is also known as the Federal Trade Commission method and is based on the proposition that all manufactured products are joint products and that the same rate of profit is earned on each. Use of this method requires that the market value of all products refined during the month be calculated. Total crude and processing costs are prorated among the various products refined according to their market value. This results in a cost for each product which is a fixed percentage of its market price. For example, assume 100 barrels of crude oil are processed and yield 47 barrels gasoline, 6 barrels kerosene, 14 barrels distillate fuel oil, and 25 barrels residual fuel oil. These add up to 92 barrels. The remaining 8 barrels are considered as lost through evaporation in the distillation and cracking processes. Using the sales realization method, each of the above products, which are obtained from the crude oil, is considered to be a joint product. If the yield of each product is multiplied by its sales value the resultant figure can be termed "yield times market price." Thus assuming that the sales value of a barrel of gasoline is $2.00, then the "yield times market price" for gasoline would be 47 barrels multiplied by $2.00 or $94.00. Similarly, the yields of the other products obtained are multiplied by their respective sales values per barrel. The "yield times market price" of the various products are totaled and the sum represents the total market value of all the products obtained from the original crude run of 100 barrels. The total cost of the 100 barrels of crude oil is then determined (i.e., cost of the raw crude plus refinery processing costs) and it is stated as a ratio of the total market value of all products obtained from the original crude run. This ratio is multiplied by the sales value of each refined product and the resultant figure represents the cost of that product as determined by the joint product method. Thus in the present case if we assume that the total market value of all the products obtained from the original crude run of 100 barrels is $300 and that total costs of the 100 barrels of crude are $150, then the ratio of 150 to 300 would be as one is to two. Multiplying the sales value of a barrel of gasoline ($2.00) by one-half gives $1.00, which represents the cost of a barrel of gasoline based on the joint product method. To arrive at a per gallon cost simply divide the per barrel cost by 42, as there are 42 gallons to a barrel. Similarly, the cost of each of the other refined products is obtained. The figures quoted above, are purely hypothetical and simplified for purposes of the illustration. They bear no actual relation to figures as they exist in the industry.

As stated previously, the joint product method assumes that each product, be it gasoline, middle distillate or any other product, carries the same margin of profit or loss. As a result, a change in market prices gives rise to changes in unit costs, but there may have been no actual change in the cost of produc-

[3] The National Association of Cost Accountants Bulletin, Sept. 1, 1942, Sec. I, Vol. XXIV, No. 1, S. K. Waters, *Oil Refining Accounting*, p. 11.

tion.[4] The cost of each product is tied directly to its selling price. Because petroleum products very often are subject to wide fluctuation due to seasonal demand, their costs are bound to vary seasonally.

The By-Product Method

The by-product method of cost allocation for petroleum products assumes that a refinery is primarily operated for the purpose of producing one major product, gasoline. All other products obtained as a result of refining the crude oil are considered to be by-products.[5]

Under this method, the cost of gasoline is ascertained very easily. As in the joint product method, the total dollar cost of the crude oil including processing is computed. Then the total dollar market value of each of the by-products is computed. Subtract the total dollar market value of the by-products from the total cost of crude oil and its processing. The remainder reflects the cost of gasoline according to the by-product method.

This method may be simply illustrated. Assume that 100,000 barrels of crude oil are to be refined and that total costs (raw crude plus processing) are $2.00 per barrel, or $200,000.00 for the 100,000 barrels. The various product yields other than gasoline are then listed. Each of these products is considered to be a by-product. Let us assume that the various by-products are aviation gasoline, kerosene, furnace oil, lube oil, and fuel oil, which when added together and taking account of the loss which occurs in the distillation process, accounts for 56,500 barrels of the original crude run of 100,000 barrels. The remaining 43,500 barrels is motor gasoline which, under this method, is the main product. The sales value of each by-product is then determined, and is multiplied by the respective yield of each product. Thus, if 10,000 barrels of kerosene were obtained from the refining process and the market value of a barrel of kerosene were $1.50, then the product of these two figures would be $15,000.00. This represents the by-product credit for kerosene. Similarly, the by-product credits for each of the other products are obtained and then totaled. By-product credits are subtracted from the total cost of the original crude run. If, in this case, the by-product credits totaled $113,000.00, this figure would be subtracted from the total crude cost of $200,000.00 and the remainder of $87,000.00 would be the cost of the main-product; motor gasoline. Since motor gasoline in this case totaled 43,500 barrels, the cost of motor gasoline as determined by the by-product method would be $2.00 per barrel.

Since the by-products bear costs equal to their market prices, the cost of gasoline by the by-product method bears an inverse relationship to the market price of the various by-products. The greater the by-product market prices, the lower the cost of gasoline determined by this method. The by-product method indicates the maximum share of total cost of refining crude oil that business policy may properly make it expedient to charge to gasoline under some circumstances.[6] This is so, because it has been argued that some products such as fuel oil, are often sold at less than an equal quantity of crude, i.e., at a "specific" loss. Before the advent of the oil burner, "fuel" oil was a waste and had no recovery at all. Therefore, it is necessary to recover such losses and make a profit in the prices charged for gasoline.[7] The greater the dollar amount of recovery on by-products, the lower the price at

[4] The Journal of Accountancy, Aug. 1949, Vol. 88, No. 2, F. A. Youngs, *Esso Uses Replacement Values in its Cost Accounting,* p. 144.

[5] Federal Trade Commission, *Report on the Price of Gasoline in 1915;* 1917, Government Printing Office, Washington, p. 73.

[6] *Ibid.,* p. 73.

[7] *Ibid.,* pp. 74-75.

which gasoline can be sold, because of lowered costs.

Replacement Value Method

The replacement value or "gasoline value" method of costing petroleum products assumes that the costs of all stocks or distillates, except heavy fuel oil, are equal to their values as sources of gasoline.[8] This method is predicated on the assumption that crude oil will be processed so as to yield a maximum amount of gasoline, with fuel oil as the only by-product. The cost of gasoline produced is equal to the sum of the cost of crude oil consumed plus processing costs and less a by-product credit for the fuel oil produced. Intermediate product costs are computed on the basis of what it would cost to process an additional amount of crude oil to replace the gasoline lost by not processing such intermediate product to ultimately yield gasoline, less the operating costs saved by not processing such product to gasoline, and plus the operating costs required to treat and finish the intermediate product to put it in marketable condition.[9] This method of costing is more complicated than the methods previously described, because it necessitates calculating the costs and yields involved in cracking each intermediate distilled stock.

Using the replacement value method, the first step is the computation of the basic cost of gasoline. It is assumed that one hundred barrels of crude oil when refined so as to produce a maximum yield of gasoline will yield 63 percent gasoline, 23 percent fuel oil, and the remaining 14 percent will be loss. Let us assume that total costs when refining for maximum gasoline yield are $2.00 per barrel and that the sales value of fuel oil is $1.00 per barrel. In this case the by-product credit for fuel oil would be 23 percent multiplied by $1.00 or $23.00. Since total costs of the crude oil are 100 barrels multiplied by $2.00 or $200.00, and the by-product credit for fuel oil is $23.00, subtracting the fuel oil by-product credit from $200.00 leaves $177.00, which represents the cost of the 63 percent yield of gasoline. Since $177.00 represents that portion of an original 100 barrel run of crude oil which results in gasoline (63 percent) it follows that the value of 100 barrels of pure gasoline would be approximately $281.00 ($281.00 multiplied by 63 percent is approximately $177.00) or $2.81 per barrel of gasoline. This is the cost of a barrel of gasoline by the replacement value method.

To determine the cost of intermediate distillates, it is first necessary to ascertain what the intermediate distillate would yield were it to be further refined so as to produce a maximum quantity of gasoline. Thus, let us assume that in processing kerosene so as to produce a maximum yield of gasoline, the resultant products are 75 percent gasoline, 15 percent residual fuel oil, and the remaining 10 percent is loss. Having previously determined that a barrel of pure gasoline is worth $2.81, the value of that portion of a barrel of kerosene which would result in gasoline were it to be further refined running for maxium gasoline yield would be $2.81 multiplied by 75 percent or $2.1075. As previously stated, it was assumed that the value of a barrel of fuel oil is $1.00. Therefore, the value of the fuel oil obtained by refining a barrel of kerosene is $1.00 multiplied by 15 percent or $0.15. Adding $2.1075 and $0.15 equals $2.2575, the value of a barrel of kerosene were it to be further refined for maximum gasoline yield. Since the object is to determine the cost of kerosene, it is assumed that the kerosene is not actually processed into gasoline. Therefore, whatever finishing costs are saved by not processing the kerosene further, are subtracted from $2.2575. To the re-

[8] American Petroleum Institute, *Petroleum Industry Hearings Before the Temporary National Economic Committee,* 1942, Lord Baltimore Press, Baltimore, p. 142.

[9] The Journal of Accountancy, Aug. 1949, *op. cit.,* p. 145.

sultant figure are added whatever additional costs are required to place the raw kerosene distillate in marketable condition. By following the same procedure as was described for kerosene, with the other intermediate distillates, the replacement value of each of them is determined. The final step is the computation of the actual cost of a barrel of gasoline. In determining the basic cost of gasoline it was assumed that 100 barrels of crude oil were refined so as to produce a maximum yield of gasoline. To determine the actual cost of barrel of gasoline it is assumed the crude oil is refined so as to yield maximum by- or co-products. Multiplying the percentage yield of each by-product by its respective barrel value as obtained by the replacement value method gives the value of that portion of the refined crude oil for each particular product. Totaling the values of the by-products and subtracting from total costs of the crude, including processing costs, leaves a remainder which represents the cost of that portion of the crude which is gasoline.

The basic factors which determine product costs when the replacement value method is used are the cost of the crude oil, the cost of refining, and the realization on residual fuel. A problem arises in computing the value an intermediate distillate would have were it to be cracked into gasoline and fuel oil. Consideration must be given the kind of equipment the refinery has. Hence, costs on the replacement value basis depend largely on the type of refinery equipment rather than on the selling prices of the various products produced.[10]

Miscellaneous Costing Methods

The barrel-gravity method is one of the less frequently used methods for costing refined petroleum products. It is based on the fact that there is some correlation between the gravity of finished petroleum products and their commercial value. Using this method, a refinery multiplies the barrel yield of each product from a given quantity of crude oil by that product's gravity to obtain a barrel-gravity factor. The barrel-gravity factor is stated as a percentage of the total of all the barrel-gravity factors. Crude oil and processing costs are then allocated to products on the basis of such barrel-gravity factors.[11] In effect, the method is the same as the sales realization method except that costs in this case are allocated on the basis of barrel-gravity factors instead of the sales realization of the various refined products.

Another costing method is the gravity-heat unit method. Under this method, the cost of the raw crude oil is distributed in exactly the same manner as outlined by the barrel-gravity method. However, processing costs are distributed according to the heat units required to manufacture each product. Hence, when this method is used some method must be established for determining the heat units required to obtain each product from the various manufacting processes.[12]

The chief drawback to the barrel-gravity method and the gravity-heat unit method is that the correlation between the gravity and value of refined products is slight and, in some cases, a petroleum fraction may be worth more than others even though its gravity is lower. Another method is that of allocating costs on the basis of quantity. In this case an equal share of the total refinery costs are allocated to each product on a quantity basis. The result is that a barrel of fuel oil costs exactly the same as a barrel of gasoline. However, it cannot be said that all refined products have the same value. Therefore, this method is erroneous.

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10 American Petroleum Institute, *Petroleum Industry Hearings Before the TNEC*, *op. cit.*, p. 366.

11 The Arthur Andersen Chronicle, Dec. 1945, Vol. VI, No. 2, *op. cit.*, pp. 59-60.

12 The National Association of Cost Accountants Bulletin, Sept. 1, 1942, Sec. I, Vol. XXIV, No. 1, S. K. Waters, *Oil Refinery Accounting*, p. 13.

Summary

To this date, the part assigned to product costing is one of aiding management in its everyday production planning and for economic studies. However, there is no reason why product costing in the petroleum industry is any less important than it would be in any other industry. The fact that to date it has remained insoluble to a degree does not in any way lessen the need for it.

Of the various major product costing methods which have been discussed, (sales realization method, by-product method, and replacement value method) I believe that the replacement value method offers the best solution to the problem of costing refined petroleum products.

Neither the sales realization method nor the by-product method are based on valid assumptions. The sales realization method ties the cost of each refined product to its sales price. Under this method a variation in sales price due to seasonal factors will change the cost of production of a refined product when, in fact, its actual cost of production has not changed at all. This method assumes that refined petroleum products are joint products and that the same rate of gross profit is earned on each product. Products may be considered to be in joint supply when they are obtained from a single process in relatively unvarying quantities. This is true when the straight distillation process is considered by itself. However, by the use of additional processes the quantities of refined petroleum products can be varied to a great extent and in this sense they should be considered as products in common supply rather than joint supply. Herein lies the distinction between the petroleum industry and, for example, the meat packing industry. Both industries utilize one basic raw material: in the case of the petroleum industry it is the crude oil, while in the meat packing industry it is the slaughtered animal. In both cases a multiplicity of finished products can be obtained. However, in the case of the meat packing industry the quantities of products obtained cannot be significantly varied. The proportion of hide, fat, bone, and so forth which is obtained from the slaughtered animal represents a fairly unvarying proportion of the total animal. This is a case of products being in joint supply. The petroleum industry differs from the meat packing industry in that taking the refining process as a whole the quantities of refined products which are obtained from the crude oil can be and are varied to meet changing conditions and needs. They are products in common supply and being such the sales realization method, by assuming that refined petroleum products are joint products, fails in its approach to the problem of costing these products.

The by-products method likewise is based on an erroneous assumption. It assumes that gasoline is the main product and all other products are by-products. While gasoline is undoubtedly the most important product obtained from the refining process it would be incorrect to say that all the other products are by-products. The multiplicity of products which are obtained from the refining process are not merely the result of a secondary operation. Their production is definitely planned for in advance. Their sales value represents a substantial portion of the total income of a petroleum refinery. To treat them as by-products and compute their cost accordingly is definitely at variance with facts as they exist.

The replacement value method, although it involves more intricate computation, appears to present the most satisfactory solution to the problem of costing petroleum products because it recognizes the basic nature of petroleum refinery costs. These costs are essentially differential or marginal costs. The production of a petroleum refined product is the result of considering a number of alternatives. Before planning for the production of a par-

(Continued on page 663)

New York State Tax Forum

Conducted by Benjamin Harrow, C.P.A.

Effect of Federal Tax-Free Reorganizations Under Article 9

Tax-free reorganizations usually involve exchanges of property which are not taxed as completed transactions because they are part of a plan of reorganization. These exchanges may involve transfers of property by one corporation for securities of another corporation or transfers of securities of one corporation for securities of another corporation. They also may involve an exchange between a corporation and its stockholders of new securities for securities of the corporation effecting the exchange under the plan of reorganization. Under Section 112(b)(11) of the Internal Revenue Code, the stockholders of a corporpation may receive securities received by a corporation in exchange for property or stock or both, as a distribution. Such a distribution is not deemed to be a taxable dividend if it is made as part of a reorganization under Section 112(b)(11). What recognition if any is given to this tax-free distribution under the franchise tax law?

This situation was submitted to us recently. A New York real estate corporation taxable under Article 9 owns all the stock of corporations B and C, also real estate corporations. It plans a reorganization under Section 112(b)(11), whereby it will transfer the stock of corporations B and C to a new corporation D in exchange for the D stock and then proposes to distribute the D stock to the stockholders of A.

Under Section 182 of Article 9, a real estate corporation is subject to a tax of 2% on dividends paid during the preceding taxable year. The term "dividends" includes any distribution to stockholders which is deemed to come out of earned surplus and such a distribution may be in the form of property other than cash. It would seem that the D stock distributed to the A stockholders comes within the provisions of Section 182 and the corporation would be subject to the 2% tax to the extent of its earned surplus.

Benjamin Harrow, C.P.A., has been a member of our Society since 1928. He is a Professor of Law at St. John's University.

Mr. Harrow has been a member of the American Institute of Accountants since 1922 and is a member of the New York Bar. He is now serving as one of the Vice-Presidents of the Society and is also on the Society's Committees on Awards and Publications, and is past Chairman of its Committee on State Taxation. He is also a member of the Institute's Committee on Federal Taxation and its Council.

Mr. Harrow is engaged in practice as a certified public accountant and attorney in his own office in New York City.

Unincorporated Business Tax—Exempt Professions

When is a business a profession exempt from the Unincorporated Business Tax? The law recognizes four classic professions as exempt from tax and the regulations add eleven others. In a recent case[1] a Columbia professor thought he was entitled to this exempt status. He was engaged as an educational consultant in school building planning. He referred to his activities as "educational plant engineering", and engineering certainly sounds like a profession. In fact Dr. Engelhardt pointed to *Matter of Teague* v. *Graves*,[2] where an industrial designer was held to be an exempt profession, and *Matter of*

[1] *Engelhardt,* 281 A.D. 1051.
[2] 261 App. Div. 652; affd., 287 N. Y. 549 (1941).

Geiffert v. *Mealey*,[3] where a landscape architect was exempt from the Unincorporated Business Tax. In a *per curiam* opinion, the Appellate Division distinguished those cases from that of Dr. Engelhardt by noting that in those cases various colleges and universities maintained regular courses of specialized instruction extending over four or more years and leading to academic degrees. In Dr. Engelhardt's case some institutions of higher learning offer one or more semester courses dealing with school planning, but such courses were not required for any specific academic degree. Hence Dr. Engelhardt was held to be subject to the tax. Apparently the first step to a profession is an academic degree.

Statute of Limitations—Omission From Gross Income of an Item Included in Capital Gain

In 1938, capital gains were eliminated from ordinary income and separately taxed. The question has arisen as to whether gross income includes capital gains. This can be important in a situation where a taxpayer has omitted from ordinary income an item which should have been included therein, but which had been erroneously included as a capital gain and the amount is in excess of 25% of gross income. The answer to that question will determine whether the three-year statute of limitations applies, or the five-year provision for auditing the return.

The Attorney General recently issued a ruling[4] on this question. He held that it is the character of the receipts as stated by the taxpayer himself in his return which determines whether more than 25% has been omitted. Section 373 of the Income Tax law provides that where there has been omitted from gross income *or* capital gain as stated in a return, an amount which should have been included and is in excess of 25% of the amount of gross income *or* capital gain, the amount of tax may be determined by the Commission within 5 years. The Attorney General cited the case of *Hewitt* v. *Bates*,[5] where it was held that the statute of limitations did not run against the State where a separate return under Article 16-A had not been filed, even though the information reported on the return filed under Article 16-A disclosed all the information required for the return under the Unincorporated Business Tax. A return must be filed in strict accordance with the statute in order to start the running of a statute of limitations.

Another Aspect of the 25% Omission

Both the federal and state income tax laws contain the provision that a tax may be assessed within 5 years where a taxpayer omits from gross income an amount which is in excess of 25% of the gross income reported in the return. Suppose a taxpayer takes excessive deductions which have the effect of understating the final figure of the gross income computation, but has otherwise not failed to include all receipts or accruals. Is such taxpayer subject to the five-year statute of limitations?

This issue has recently been decided by the Circuit Court of Appeals[6] in favor of the taxpayer although the Tax Court had several times ruled the other way in earlier cases.[7] In this case, a corporation had included in the cost of goods sold a reserve for retroactive wage increases which was later disallowed. The returns covered by a five-year statute could be reaudited if the additional net income were considered to be an omission in gross income. The taxpayer contended that he had not omitted any item of taxable gain. The Court thought that Congress had in

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3 293 N. Y. 583 (1944).
4 July 22, 1953.
5 297 N. Y. 239.
6 *Uptegrove Lumber Co.* v. *Com'r.*, June 29, 1953.
7 *Corrigan* v. *Com'r.*, 155 F (2d) 164; *Ketcham* v. *Com'r.*, 142 F (2d) 996; *Foster Est.* v. *Com'r.*, 131 F (2d) 405; *Ewald* v. *Com'r.*, 141 F (2d) 750.

mind a failure to include a receipt or accrual of gross income in providing for a five-year limitation, and held that an omission from gross income is not equivalent to an understatement of the final figure in the gross income computation.

Allocation of Discount on U. S. Savings Bonds, Series G

The Series G Bonds were issued at par and bear interest at the rate of 2½% per annum, the interest being payable by check to the registered owner. The bonds may be redeemed before maturity, but in that event the redemption value is fixed at an amount which represents a reduction in the interest rate of 2½%. In a case[8] that came before the Surrogate, the trustees of an estate redeemed bonds of the face value of $73,500 for $71,295, and the trustees asked for instructions as to whether the discount of $2,205 should be charged against income or principal.

The Court referred to Treasury Department Circular No. 530, Sixth Revision, which referred to the decrease in redemption value as being an adjustment of interest to the rate appropriate for the shorter term. In effect a short-term loan would carry a lower rate of interest than a longer-term loan. The loss on the redemption is not like the loss on a sale of a security which is properly chargeable to principal. It represents an adjustment of income chargeable to the income beneficiary. Because the bond has not been held to maturity the income beneficiary has been receiving more interest than he was entitled to receive and the loss on the redemption makes appropriate the adjustment of the income.

Gift Tax—When is a Gift Completed

A recent Tax Court case[9] decides a question that frequently arises where a gift takes the form of a transfer in trust. On March 11, 1930, the taxpayer transferred property to three trustees, one of whom was her husband from whom she was separated. She retained the income for her life and provided that the income should go to two children who would also receive the principal at specified ages. She also retained the right to rescind or modify the trust in any way and at any time with the unanimous consent of all the trustees. In 1944 and on November 15, 1947, she changed the interests of the remaindermen with the consent of the trustees. On December 14, 1947, she made the trust irrevocable and then provided that it could not be rescinded or modified in any manner at any time by anyone.

The Commissioner held that this relinquishment of her power to modify or revoke the trust with the consent of the trustees subjected the taxpayer to a gift tax because that act for the first time placed the property beyond her control. The taxpayer contended that the gift in trust was complete in 1930 when the trust was created, since the reserved power required the unanimous consent of all the trustees and some of them had a substantial adverse interest in the disposition of the trust property. In 1930 the gift tax was not in effect.

The regulations provide that a gift is incomplete where the donor reserves the right to revert title to property in himself. Furthermore, if such a power is exercisable by a donor in conjunction with any person not having a substantial adverse interest in the property or the income, it is as if the donor himself had the power. A trustee as such does not have an adverse interest. It was therefore held that the gift was completed when the taxpayer relinquished the power to revoke the trust.

To constitute a substantial adverse interest the trustee must have a direct legal or equitable interest. The strong personal motive or even moral obligation that the former husband might have had to resist revocation adversely affecting his adopted children did not constitute a substantial adverse interest

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[8] *Estate of Charles J. Coulter*, 121 N. Y. S. 2d, 531.

[9] *Mary H. Latta* v. *Commissioner*, TC Memo, Dept. No. 34043, May 25, 1953.

as intended by the regulations, said the Court.

It should be noted that the retention of the income would make the transfer taxable upon the death of the donor both under the federal law and the state law (with a credit permitted against the estate tax for the gift tax).

Franchise Tax on Transportation Companies

A corporation is organized to do a shipping business. It acquires a boat and immediately charters it for a period of years to a third party under a bareboat charter arrangement, whereby it will receive a monthly charter hire. Otherwise the company has nothing to do with the actual operation of the boat. How is such a corporation taxed?

A corporation engaged in a transportation business is subject to tax under Section 183 of Article 9. This tax is based upon issued capital stock. The rate is 1 mill for each dollar of the net value of issued capital stock allocated to the state. The company is also subject to tax under Section 184. This is a quarterly tax of one-half of 1% on gross earnings in the state. If the corporation is engaged in ocean commerce it is entirely exempt from franchise tax until March 30, 1954.

Under the facts submitted, the corporation would not be deemed to be engaged in the transportation business, since it does not operate the boat. Under a bareboat charter the owner of the boat merely rents it to the charterer and collects a rental. That is not a transportation activity. The corporation would therefore be taxable as a business corporation under Article 9A and not as a transportation company. (It would however be relieved of the tax on gross receipts under Section 184.)

Effect of Death, Withdrawal or Addition of a Partner on the Taxable Year of a Partnership

A corporation is a separate taxable entity. A partnership is not separately taxed but the partners are taxed on their distributive shares of the profits of the partnership. Essentially the partnership is treated as an aggregate of individuals and not as an entity. Nevertheless there are situations in the tax law that make it desirable and equitable to treat the partnership as an entity even though it is not separately taxed. If the aggregate theory is carried to a logical conclusion, the tax effect on the individual partners may prove inequitable. The Treasury has long followed the aggregate theory. Consequently it has held that the death or withdrawal of a partner terminated the partnership. The partnership was therefore required to file a partnership return for a short period ending with the death or withdrawal of the partner. The effect of this requirement was to bunch more than twelve months income in the partner's return.

When the courts were presented with this problem they drew a distinction between dissolution and termination. If a partnership was not terminated, even though it might be dissolved, the partnership year was not disturbed so far as the continuing partners were concerned.[10] A recent ruling[11] reverses the previous position of the Treasury and now holds that a partnership is not terminated if a substantial part of the business of the partnership is continued.

The effect of the ruling upon the deceased partner or withdrawing partner is still not too clear. Prentice-Hall comments on the ruling in "What's Happening in Taxation,"[12] saying that it would be reasonable to suppose that the partnership would not be terminated as to the deceased or withdrawing partner if the investment of such partner remains subject to the risks of the business.

Under State law there is no provision which requires the closing of the taxable year of the partnership in the

[10] *Mnookin*, CA-(8), 184 F (2d) 89; *Girard Trust Co.*, CA-(3), 182 F (2d) 921; *Henderson*, CA-(5), 155 F (2d) 310.

[11] Rev. Rul. 144, IRB 1953-16.

[12] Vol. 16, Number 13, August 31, 1953.

case of death, withdrawal or addition of a partner.

Sale of Installment Obligations

Under Section 44 of the Internal Revenue Code and 358-a of the New York State Income Tax law, a taxpayer may report income on the installment basis provided he meets the requirements of the law permitting this basis. Depending upon the nature of the property sold, the gain will be ordinary income or capital gain. The disposition of the installment obligation will itself result in ordinary income or capital gain depending upon the nature of the property that was sold.

An interesting question arose in two recent cases[13] where a partnership interest was sold and the partnership held installment obligations received upon the sale of stock in trade. A sale of a partnership interest is the sale of a capital asset resulting in a capital gain. Would such gain be affected by the fact that a part of the gain is attributable to the installment obligations? The cases held that the provisions of Section 44(d) provided special treatment for the disposition of installment obligations and therefore that part of the gain on the sale of the partnership interest attributable to the installment obligations was taxable as ordinary income since they arose in connection with the disposition of non-capital assets. It was held that the provision in Section 44(4) was mandatory. Since the provisions of the State Law are similar (Reg., Art. 488-d) the State would probably hold to the same effect.

General Business and Financial Tax—Holding Companies and Dividends

The difference between the rate of tax for persons engaged in a general business, 1/5 of 1% on gross receipts, and the rate of tax for persons engaged in a financial business, 4/5 of 1% on gross income, has been used by the Comptroller to tax dividend income of a general business in a way probably not contemplated by the City Council when this tax was first introduced.

Dividend income is subject to tax under the rates applicable to a financial business if it is received by a holding company from a controlled corporation. Article 305 of the Regulations defines a holding company as a corporation owning the majority of the voting stock of another corporation.

Article 305 further provides that if a taxpayer is regularly engaged in general business and, in addition, is a holding company because it owns the majority of the voting stock of another corporation, such taxpayer is required to segregate all dividends received from such a controlled corporation and report such dividends as gross income of a financial business. Such a taxpayer therefore must file two separate returns paying 1/5 of 1% on the gross receipts from general business and 4/5 of 1% on interest and dividends received from a subsidiary corporation.

The validity of this Regulation is doubtful. The enabling act, General City Law, Article 2-B, Q 24-a, as as amended by L. 1952, C. 234, authorizes any city having a population of one million or more to impose a tax (a) of not more than 1/5 of 1% on the gross receipts from a general business, (b) of not more than 4/5 of 1% of the gross income from a financial business. The act defines a financial business as one involving the services and transactions of private banks, private bankers, dealers and brokers in money, credits, commercial paper, bonds, notes, securities and stocks, monetary metals, factors and commission merchants and dealers in merchandise where the spread or difference between the cost of goods sold and the sale price is analogous to or in the nature of a commission and does not in any event exceed three percent of the cost of goods sold.

Apparently the enabling act does

(Continued on page 660)

[13] *Moody*, 19 TC 350; *Krist*, TC Memo, July 8, 1953.

Accounting at the S. E. C.

Conducted by Louis H. Rappaport, C.P.A.

In the April, 1953, issue of this magazine we wrote about an accounting rule which the Securities and Exchange Commission proposed to adopt dealing with the treatment of compensation in the form of stock options. As we pointed out at that time, the SEC's proposal was important because the accounting apparently preferred by the SEC was at variance with principles enunciated by the American Institute of Accountants Committee on Accounting Procedure.

Original AIA position

At the risk of boring our readers, we should like to trace the development in recent years of thinking on the question of accounting for compensation in the form of stock options. The first authoritative statement on the subject was Bulletin No. 37 of the AIA Committee, issued in November, 1948. (The bulletin was adopted by the assenting votes of 19 members of the Committee, one of whom assented with qualification; 2 members of the Committee dissented.) The bulletin expressed the view that: (1) options are part of the corporation's cost of the services of officers and employees and should be accounted for as such; (2) omission of such costs from the corporation's income accounting may result in overstatement of income to a significant degree; (3) the proper date as of which to measure the value of the option is the date on which the option right becomes the property of the grantee, that is, the date on which he has met all the conditions which would permit him to exercise the option; and (4) the cost of such services to the corporation should be measured by the excess, at such date, of the fair value of the shares then exercisable over the option price thereof.

Louis H. Rappaport, C.P.A., has been a member of the Society since 1933. He is a partner in the firm of Lybrand, Ross Bros. & Montgomery, C.P.A's.

Revised AIA position

In January, 1953, the AIA Committee issued a revised Bulletin No. 37 on stock options which superseded the earlier bulletin on the same subject. (The revised bulletin was adopted by the assenting votes of 19 members of the Committee, two of whom assented with qualification; one member did not vote; there were no dissents.) The revised bulletin took the position that the date on which an option is granted to a specific individual is the appropriate point at which to evaluate the cost to the employer. The difference between the option price and fair value of the shares at the date of grant of the option represents the value of the option which should be charged to income.

Original SEC proposal

In February, 1953, the SEC announced that it was considering the adoption of an accounting rule dealing with stock options. The proposed rule would have measured compensation at the date the optionees had complied fully with the terms of the option. This, in essence, was the position taken by the AIA Committee in its first bulletin on the subject in 1948.

Revised SEC proposal

The SEC received numerous comments and suggestions relating to its proposed accounting rule, and has decided not to prescribe a procedure for determining the cost, if any, of stock options to be reflected in income statements filed with the Commission. Its February, 1953, proposal was prompted, said the SEC, by the apparent lack of unanimity of opinion among accountants as to the appropriate manner

in which the amounts, if any, to be charged against income representing compensation to recipients of stock options should be determined. The principal point of disagreement was the time at which the determination should be made. Persuasive arguments were advanced, said the SEC, for each of three dates, i.e., when the options were (1) granted, (2) exercisable, or (3) exercised.

The Commission is of the opinion that the propriety of using any one of these dates in all cases has not been established, and that determination of, and accounting for, cost to the grantor based upon the excess of fair value of the optioned shares over the option price at any one of the three dates advocated might, in some cases, result in the presentation of misleading income statements.

The Commission in its announcement said,

> "However, in order that investors may be apprised of the monetary significance of the concessions made by registrants to officers and employees through the granting of stock options, the Commission proposes to adopt a rule to be added to Regulation S-X, and to be designated Rule 3-20 (d), which will require full and complete disclosure of all stock option arrangements in financial statements filed with the Commission."

The text of the rule, which it is proposed to adopt, is as follows:

> *Rule 3-20 (d). Capital Stock Optioned to Officers and Employees*
>
> (1) A brief description of the terms of each option arrangement shall be given, including (i) the title and amount of securities subject to option; (ii) the date or dates upon which the options were granted; and (iii) the date or dates upon which the optionees became entitled to exercise the options.
>
> (2) State per share and in total (a) with respect to the shares subject to option at the balance sheet date, the option price, and the fair value at the dates the options were granted; (b) with respect to shares as to which options became exercisable during the period, the option price, and the fair value at the dates the options became exercisable; and (c) with respect to the shares as to which options were exercised during the period, the option price and the fair value at the dates the options were exercised.
>
> (3) State the basis of accounting for such option arrangements and the amount of charges, if any, reflected in income with respect thereto.

The Commission invited all interested persons to submit views and comments on the proposed rule addressed to the Securities and Exchange Commission, 425 Second Street, N. W., Washington 25, D. C., on or before September 25, 1953. We believe that comments received reasonably soon after that date will also be welcome.

New York State Tax Forum

(Continued from page 658)

not mention holding companies. The New York City law, Chapter 46—Title B, Q B 46-1.0 of the New York City Administrative Code, in defining "financial business" repeats *verbatim* the definition of the enabling act but inserts between the words "private bankers" and "dealers and brokers in money" the words "holding companies."

The law itself does not define the term "holding companies." The definition appears in Article 305 of the Regulations. The term "holding company" had an established meaning under the old New York State Franchise Tax law. Section 188 of Article 9 of the Tax Law (repealed in 1944) levied a special tax on holding corporations and defined a holding corporation as every domestic corporation, joint stock company or association, *whose sole business* consists of the holding of stocks of other corporations for the purpose of controlling the management and affairs of such other corporations.

It is unrealistic to call a business corporation that conducts a part of its activities through a subsidiary corporation as being a holding company engaged in a financial business. What the city in effect does is to segregate part of the income of a general business and to subject it to an onerous tax. The validity of Article 305 of the Regulations is being tested in the courts.

Office and Staff Management

A forum for the exchange of views and information on all aspects of the administration of an accounting practice.

Conducted by MAX BLOCK, C.P.A.

Reduction in Size of Tax Return Form 1120

In this column (December, 1951 issue) reference was made to a suggestion for reducing the size of Form 1120 so that it could be filed without folding. A very substantial amount of filing space could thereby be saved and the return and attached papers could be handled more easily. In addition, the physical deterioration of the return along the fold can be avoided.

All of this will soon be possible because the Commissioner has recently announced that the return will be reduced in size. It will then fit into a legal size cabinet without folding. Thanks, Commissioner Andrews!

Reproduction Machinery Exhibit—Urgent

The Committee on Administration of Accountants' Practice sponsored a technical meeting in November, 1952, at which a few reproduction machines (for tax returns, reports, etc.) were exhibited and demonstrated. It was such a successful meeting from the viewpoints of both attendance and interest that a repeat meeting will be held on October 14th at the Hotel Roosevelt, starting 7 P. M.

At the forthcoming meeting new machines, particularly in the low price field, will be exhibited and demonstrated. Accountants who would not invest in a costly machine may now find one to suit their budget. Committee members will, as before, talk on the latest developments in the use of reproduction devices.

Accountants who are not using such equipment are urged to attend this meeting to learn about the possibilities of revolutionizing their typing departments, reducing costs, and giving better service. Out-of-towners should make it a point to come to New York City for this express purpose—it is that important.

MAX BLOCK, C.P.A. (N. Y., Pa.), is a former chairman of the Committee on Administration of Accountants' Practice of the New York State Society of Certified Public Accountants. He is a lecturer at The City College of New York in the graduate course on Accounting Practice. Mr. Block is a member of the firm of Anchin, Block & Anchin.

N. A. C. A. Bulletin

A subscription to this magazine, the monthly publication of the National Association of Cost Accountants, is recommended to those accountants who do not presently receive it. It is virtually a must for practitioners who are interested in the accounting functions related to management. The magazine contains highly informative articles not alone on cost accounting but on subjects such as industry systems, incentive plans, practical budgeting, managerial organizations, internal control, internal reporting, and numerous management matters which are of interest, even if not of direct concern, to accountants.

The publication address is 505 Park Avenue, New York 22, N. Y., and the cost is $10 per year.

Payroll Tax Notes

Conducted by SAMUEL S. RESS

New York State Unemployment Insurance

Experience Rating "Quarterly Factor" Allocations of Bonuses, etc.

A member of the Society had a problem affecting the determination of his client's contribution rate under the Section 581 experience rating provisions of the law. Because this matter may be of general interest to the members of the Society he has consented to have the substance of his inquiries and the Unemployment Insurance Division's answers to his questions made available for publication in this column. The letter asks *(inter alia)*:

"* * *

"4. Where application for apportionment of the 1950 bonus was not previously filed, can this now be considered for the 1953 rating (which includes 1950 in the calculation)?

"5. If the apportionment of the 1950 bonus were submitted at this time will it be allowable for the 1954 rating calculation?"

The Unemployment Insurance Division replied:

"* * *

"The answer to question 4 is No, since Regulation 30 provides a deadline by which time the request for allocation must have been made. Regulation 30 states that the request for an allocation of a bonus or lump-sum payment for a period of more than three months must have been submitted in writing to the Division on or before July 1, following the year in which such payments were made.

"The answer to question 5 is No, since this is covered by the answer to question 4."

The negative position taken by the New York State Unemployment Insurance Division, while in accord with the regulations promulgated by the Industrial Commissioner, is in need of amendment, if an inequity that the law seeks to remedy is to be the subject of relief to such an employer, who is barred for three years from seeking to remedy an oversight in a preceding year. Because the employer had failed to notify the Division by July 1st, 1951, that he desired to allocate certain bonus payments made during the fourth quarter of 1950 among the four calendar quarters of that year, he has been barred from requesting that the allocation be made of the 1950 bonus payments so that he may get a more favorable quarterly factor assigned, within sufficient time prior to fixing the rates for the years 1953 and 1954. Because of administrative necessity, the regulation is reasonable insofar as it applies to the fixing of the 1952 contribution rate only.

It appears from a reading of the pertinent paragraph in subd. (h), section 581, paragraph 3, of the Unemployment Insurance Law, dealing with the "Employer's Quarterly Factor" for Experience Rating purposes, that the intention of the Legislature in empowering the Industrial Commissioner to prescribe regulations governing this situation was not limited to fixing a single date, as has been done in Regulation 30. The language used in the statute reads:

". . . Upon request of an employer made in such manner and at *such times* (emphasis ours) as may be prescribed by the Commissioner, remuneration paid during any

SAMUEL S. RESS has been an Associate Member of our Society since 1936, and is also a member of the Bar. He has specialized in the payroll tax field since the inception of this type of legislation in 1936.

Dr. Ress is Vice Chairman of the Society's Committee on Labor and Management and a member of its Committee on State Taxation.

calendar year in the form of annual bonuses or other lump sum payments for services performed over a period of more than three months shall be apportioned equally among the four calendar quarters of such year for the purpose of computing quarterly decrease quotients. . . ."

The regulation should be amended so as to permit the apportionment to be made for subsequent years even though too late for a current year.

Request Reporting Penalties

These continue to be a sore spot among members of the Society who represent clients in small businesses. Some relief should be provided by the Unemployment Insurance Division, either by amendment of the regulations or more sympathetic treatment, especially in those many cases where the employer has taken reasonable measures to comply with the Request Reporting requirements. A grace period of at least five days would not cause any hardship on the administrative end and would eliminate most of the sore spots.

Costing for the Petroleum Refining Industry

(Continued from page 653)

ticular refined product the refiner must answer the question: Does this product represent the best potential revenue producer from its portion of a barrel of crude oil? He answers this question by considering what additional costs are necessary to produce a product of higher value. Thus the problem of deciding what products are to be produced and in what quantity resolves itself into a matter of the petroleum refiner maximizing his profit. This problem of getting the greatest return in product value from a barrel of crude oil is the refiner's basic challenge.[13] The replacement value method attempts to answer this challenge by measuring the cost of petroleum products in terms of what it would cost to process them further into gasoline. By considering petroleum product costing as a matter of alternative costs it most nearly approximates conditions as they actually exist in the petroleum refining industry.

Conclusions

1. In industries where one product's conversion results in many products around the point of separation, costing is difficult and usually arbitrary.

2. In the long run the selling price of any product is governed by costs and supply irrespective of costing method employed.

3. The purpose of assigning or allocating costs is to aid management in the recovery of costs and in addition make a profit. By information thus obtained:

   (a) Management can set its selling price within reasonable limits, which are further restricted by the competitive economy.

   (b) Management can carry out a sound competitive policy rather than one which will lead to disaster by ruinous competition.

   (c) Management can gauge its operations wisely.

4. The method of costing is primarily important as a guide to management for proper planning of production so that total costs will be recovered.

5. The degree of refinement, is a course which is adopted from several alternative possibilities, depending upon which will yield the greatest revenue.

   (a) Chemical engineers play a major role in determining which policy management should pursue.

   (b) The accountant's role is one of evaluation of the results of managerial policy.

[13] Accounting papers, 6th annual conference of accountants, The University of Tulsa, May 1-2, 1952, A. R. Bell, Jr., *Refinery Costs,* p. 31.

Book Reviews

(Continued from page 617)

The law schools generally have agreed that their aim is not to make law students into accountants. Rather the aim is to develop in law students the capacity to communicate intelligently with accountants and businessmen, to comprehend accounting formulae and data, and to conceive the possibilities and limitations of accounting as an instrument of economic and commercial policy.

Despite agreement as to the goal, however, there has not been agreement as to method. Some law schools offer courses similar to the first-year accounting courses of business schools. These courses, it has been argued, satisfy the lawyer's need for a practical understanding of the accounts reflected in the balance sheet and in the income statement. Other law schools, such as Harvard, have been critical of that approach as one calculated to train bookkeepers and junior accountants rather than to equip lawyers to understand the broad issues of accounting. This latter group of law schools, after calculating the risks inherent in teaching a man to paddle a canoe before teaching him to swim, has elected to minimize the emphasis on debit and credit and bookkeeping mechanics and instead to confront the student almost immediately with the broader issues of accounting and accounting philosophy, perhaps giving him a citation to a standard accounting work such as *Finney* or *Mason* to help him over the bypassed areas.

Accounting and the Law, which contains the usual type of casebook materials and also a substantial amount of text and notes, seems to be designed for a law school course which in some ways is a compromise of these opposing views. The authors first devote a full 211 pages to the more technical aspects of accounting. Thereafter, they treat the various accounting statements, including the balance sheet and the income statement, in terms of their relationship to the flow of short-term, long-term and proprietary capital. Attention is given also to cost accounting and to analysis of statements.

To this extent, the book is somewhat similar in coverage to certain other books prepared for law school use. For example, Amory's *Materials on Accounting* is largely duplicated, except that the latter is less comprehensive in its treatment of accounting mechanics. Shapiro and Weinshienk, *Cases and Materials on Law and Accounting,* contains similar materials and differs principally in that it subdivides the subject matter into legal areas such as corporations, public utilities, and trust and estates and places more emphasis on the accounting differences between these areas.

Accounting and the Law, however, does not stop with modifying the coverage of earlier books. Rather it adds additional materials which should be invaluable in furthering the agreed-upon effort to equip law students to handle those legal problems involving a comprehension of accounting principles. For example, the book contains a chapter dealing with the relationship between accountants and lawyers, an understanding of which should help lessen the interminable squabble over jurisdiction of the client's affairs and, perhaps more important, should serve indirectly to remind the lawyer that there are areas in which the sister profession is peculiarly well versed and into which he should not be tempted to stray without an accountant's collaboration. Along the same lines the book incorporates materials pertaining to the principles and practices of auditing, the types of auditor's certificates, and the responsibilities and liabilities of auditors. Finally, the book adds materials pertaining to the lawyer's practical application of the knowledge he should gain from the other portions of the book. For example, one chapter is devoted to the accounting problems inherent in drafting legal instruments, an area in which many present-day attorneys are notably deficient. Although draftsmanship is not easily susceptible of being taught in school, the materials at a minimum should make the student aware of the complexities and dangers of incorporating accounting terms and formulae in contracts without detailed study of the effect of these terms and formulae. The book adds also a short chapter on the problem of introducing accounting records and data into evidence before courts and administrative bodies, which should serve to relate the accounting knowledge to the law school courses on evidence and trial practice.

All in all, *Accounting and the Law* is a thorough and imaginative job, combining some of the best points of the opposing theories as to equipping lawyers to handle legal problems involving accounting aspects. Thus, it is a significant step in the direction of the goal which law schools agree they seek.

This does not mean, however, that the book and the law school course for which it is designed necessarily represent a stopping point or that further developments will be slow to come. At New York University School of Law, and perhaps at other schools, plans are already afoot for integrating accounting into other existing law courses, rather than teaching it separately as at present, in order to tie it more closely to related areas of law. Other methods may be conceived elsewhere. Thus, while *Accounting and the Law* deserves the plaudits of educators for the reasons already mentioned, the scope of its influence remains to be seen.

School of Law, New York University. — Harry F. Weyher

208

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